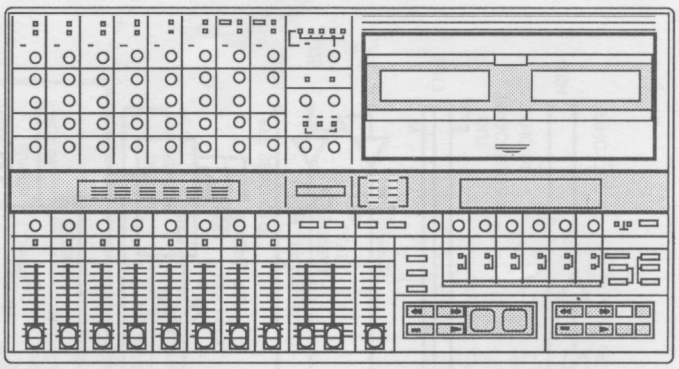
SANSUI

# SERVICE MANUAL

# WS-X1

## 6 TRK MULTI RECORDING 8 CHANNEL MIXER



**CAUTION**

1. Parts identified by the ⚠ symbol on the schematic diagram and the parts list are critical for safety.
   Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

## NOTICE

1. Some printed circuit board are not supplied assembled. To separate these in this Parts list, the stock numbers are not indicated for these boards. However, stock numbers for indivisual parts are indicated.
2. Since some capacitors and resistors are omitted from parts lists in this Parts List, refer to the Common Parts List for capacitors and resistors, which was issued on June 1987.
3. Abbreviations in this Parts List are as follows.

•Abbreviations List

| | | | |
|---|---|---|---|
| C.R. | : Carbon Resistor | E.B.L | : Low Leak Bi-Polar Electrolytic Capacitor |
| S.R. | : Solid Resistor | Ta.C. | : Tantalum Capacitor |
| Ce.R. | : Cement Resistor | F.C. | : Film Capacitor |
| M.R. | : Metal Film Resistor | M.P. | : Metalized Paper Capacitor |
| F.R. | : Fusing Resistor | P.C. | : Polystyrene Capacitor |
| N.I.R. | : Non-Inflammable Resistor | M.M.C. | : Metalized Mylar Capacitor |
| A.R. | : Array Resistor | A.C. | : Array Capacitor |
| C.C. | : Ceramic Capacitor | V.R. | : Variable Resistor |
| C.T. | : Ceramic Capacitor, Temperature Compensation | S.V.R. | : Semi Variable Resistor |
| E.C. | : Elecrolytic Capacitor | SW. | : Switch |
| E.L. | : Low Leak Electrolytic Capacitor | Chip R. | : Chip Resistor |
| E.B. | : Bi-Polar Electrolytic Capacitor | Chip C. | : Chip Capacitor |

## Specifications

### Tape recorder section

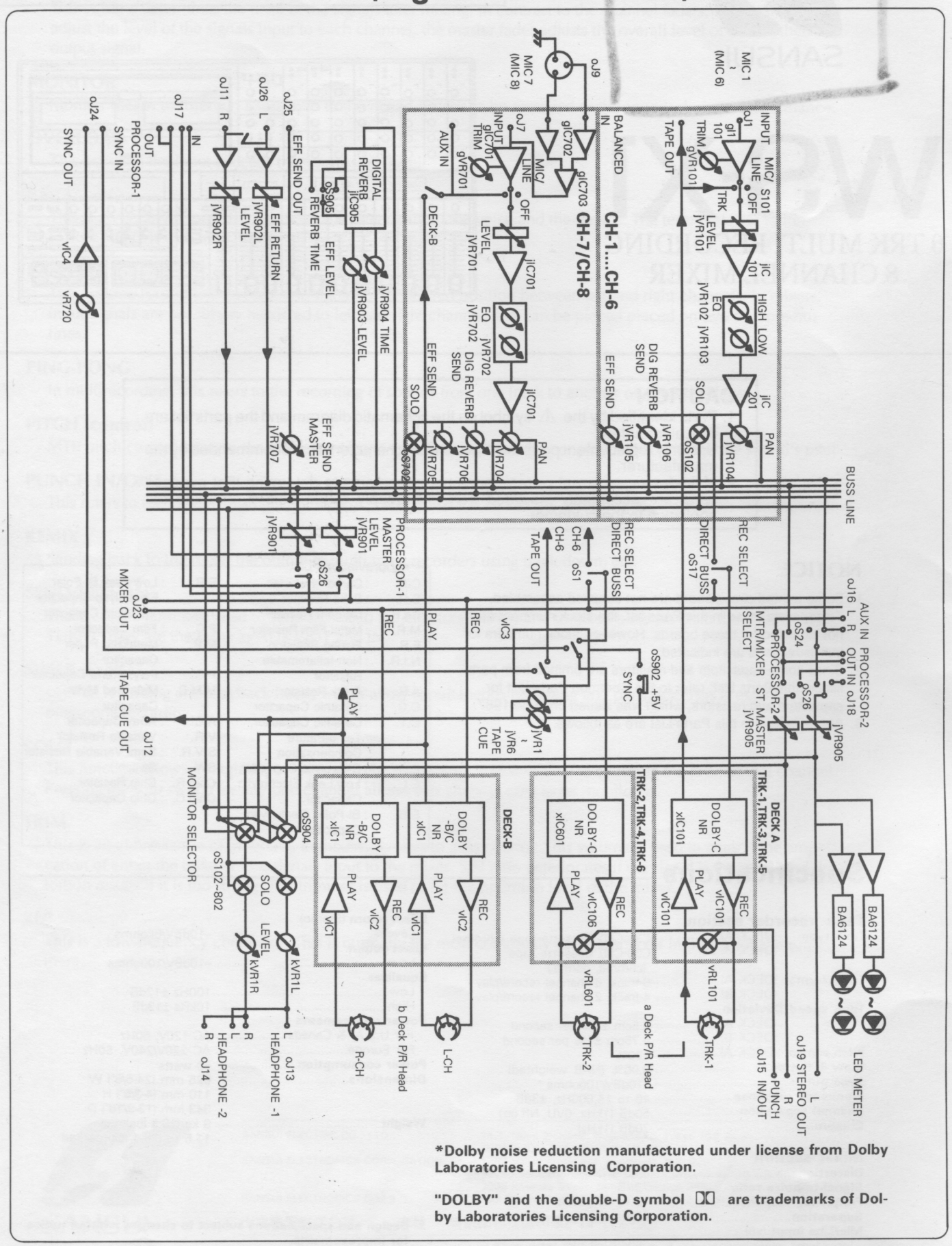
**Tape type** (DECK A) C30-C60 Cassette tape (chrome)
(DECK B) C30-C90 Cassette tape (chrome, normal)
**Track format** (DECK A) 6-track, 6-channel record/play
(DECK B) 4-track, 2-channel record/play
**Tape speed/Deviation**
(DECK A) 9.5cm ±1% per second
(DECK B) 4.75cm ±1% per second
**Pitch control** (DECK A) ±20%
**Wow & flutter** 0.06% (NAB weighted)
**Sync out** –10dBV/100ohms
**Frequency response** 40 to 15,000Hz, ±3dB
**Channel separation** 50dB (1kHz, 0VU, NR on)
**Erasure** 70dB (1kHz)

### Mixer section

**Distortion** 0.06% (amplifier)
**Signal-to-noise ratio** 72dB
**Frequency response** 10 to 60,000Hz
**Separation** 65dB
**Mic/Line input** (x8)
Input level (Mic) –50dBV at trim max
(Line) –10dBV at trim min
Impedance 50kohms
**Effect return** (Stereo)
Level –10dBV/5kohms
**Effect output**
Level –10dBV/100ohms
**Equalizer**
Low 100Hz ±12dB
High 10kHz ±12dB
**Power requirements**
For U.S.A. & Canada AC 120V, 60Hz
For Europe AC 220V/240V, 50Hz
**Power consumption** 50 watts
**Dimensions** 625 mm (24-5/8") W
110 mm (4-3/8") H
343 mm (13-9/16") D
**Weight** 9 kg (19.8 lbs) net
11.5 kg (25.4 lbs) packed

*** Design and specifications subject to changes without notice for improvements.**
*** Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.**

# 1. BLOCK DIAGRAM A (Signal Line Section)

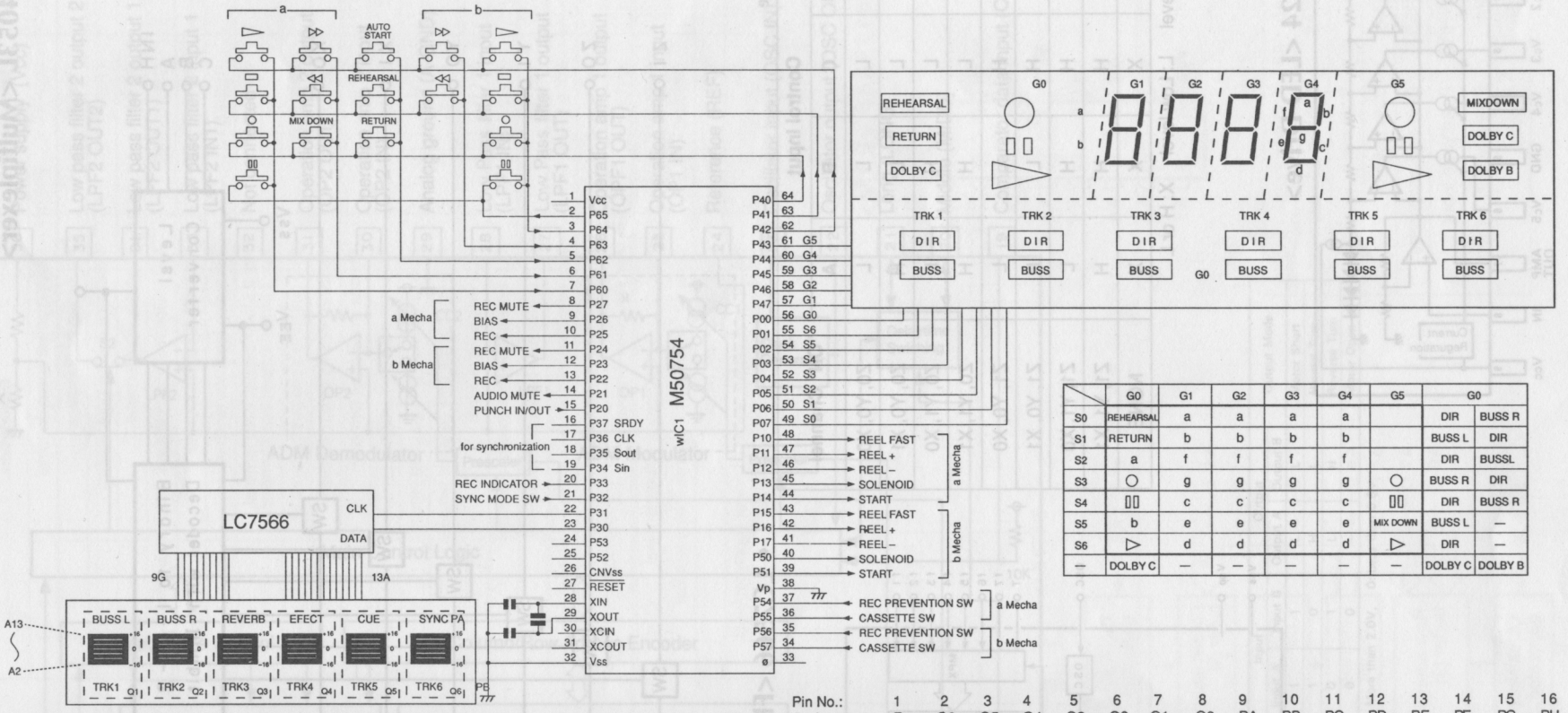



*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

# BLOCK DIAGRAM B (Control Section)






| | G0 | G1 | G2 | G3 | G4 | G5 | G0 | |
|---|---|---|---|---|---|---|---|---|
| S0 | REHEARSAL | a | a | a | a | | DIR | BUSS R |
| S1 | RETURN | b | b | b | b | | BUSS L | DIR |
| S2 | a | f | f | f | f | | DIR | BUSSL |
| S3 | ○ | g | g | g | g | ○ | BUSS R | DIR |
| S4 | ▯▯ | c | c | c | c | ▯▯ | DIR | BUSS R |
| S5 | b | e | e | e | e | MIX DOWN | BUSS L | — |
| S6 | ▷ | d | d | d | d | ▷ | DIR | — |
| — | DOLBY C | — | — | — | — | — | DOLBY C | DOLBY B |

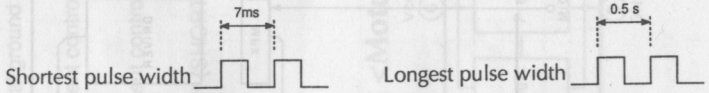
| Pin No.: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Assignment: | F | PA | PB | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 |
| Pin No.: | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Assignment: | A10 | A11 | A12 | A13 | G1 | G2 | G3 | G4 | G5 | G6 | G9 | F |

| Pin No.: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Assignment: | F | G6 | G5 | G4 | G3 | G2 | G1 | G0 | PA | PB | PC | PD | PE | PF | PG | PH |
| Pin No.: | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| Assignment: | PI | PJ | PK | PL | PM | PN | PO | PP | S6 | S5 | S4 | S3 | S2 | S1 | S0 | F |

1. The counter turns the reel pulse for 3 minutes and gives an indication.
2. Key input cannot be done within 4 second after the power ON has been reset. During that period, the counter indicates 4444, 3333, 2222, 1111, 0000.
3. If there is no reel pulse for 1 second, AUTO STOP is activated.

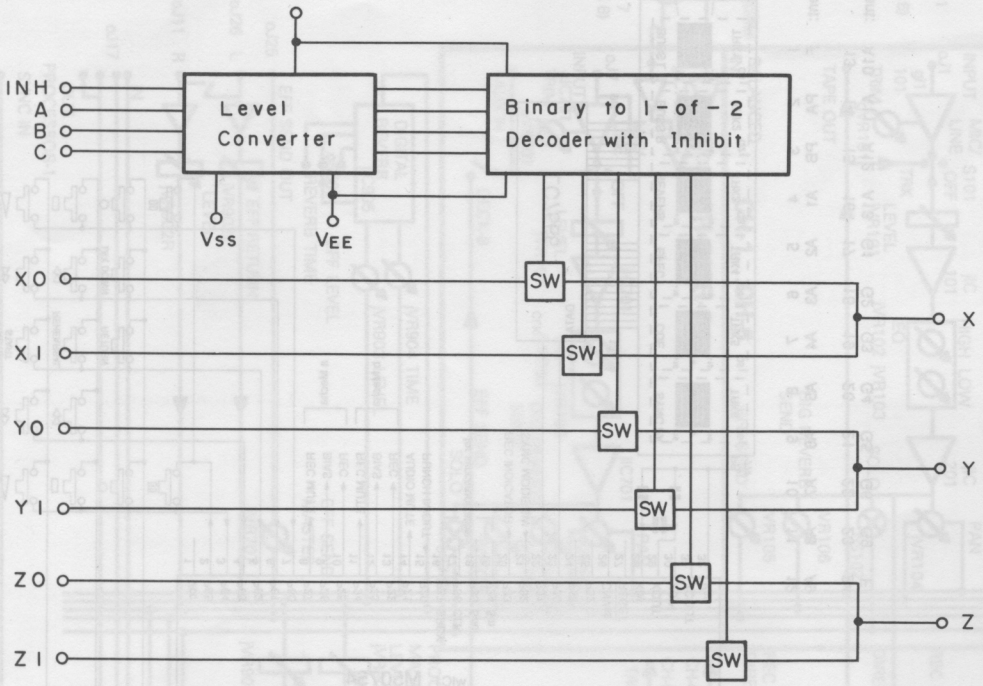
H : Without cassette
L : With cassette

H : Without REC prevention tab
L : With REC prevention tab



# 2. INTERIOR BLOCK DIAGRAM & TERMINAL FUNCITON OF IC

## • µPD4053L <Multiplexer>

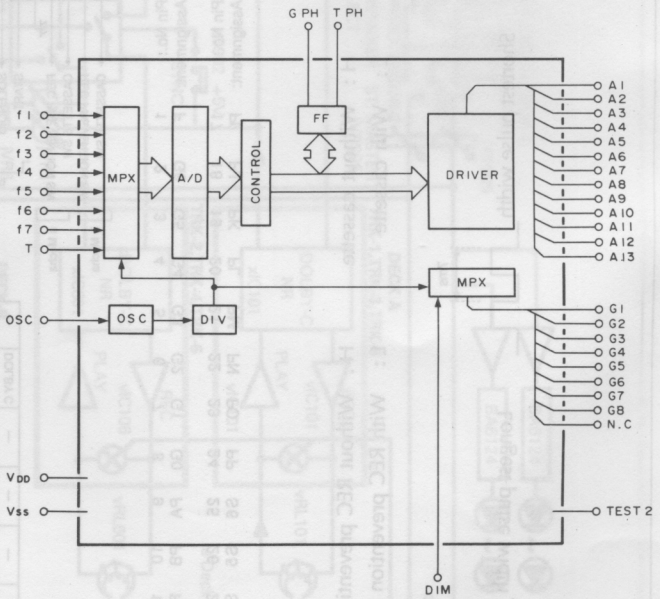



**Truth Table**

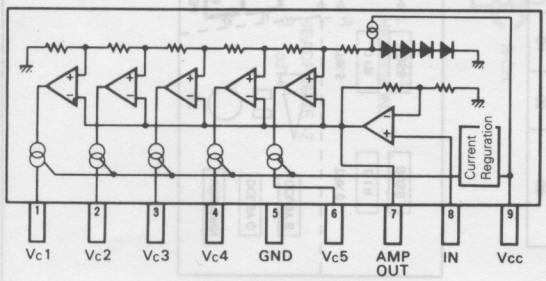
| Control Input | | | | "ON" Channel |
|---|---|---|---|---|
| INHIBIT | C | B | A | |
| L | L | L | L | Z0, Y0, X0 |
| L | L | L | H | Z0, Y0, X1 |
| L | L | H | L | Z0, Y1, X0 |
| L | L | H | H | Z0, Y1, X1 |
| L | H | L | L | Z1, Y0, X0 |
| L | H | L | H | Z1, Y0, X1 |
| L | H | H | L | Z1, Y1, X0 |
| L | H | H | H | Z1, Y1, X1 |
| H | X | X | X | NONE |

H: High level L: Low level X: H or L

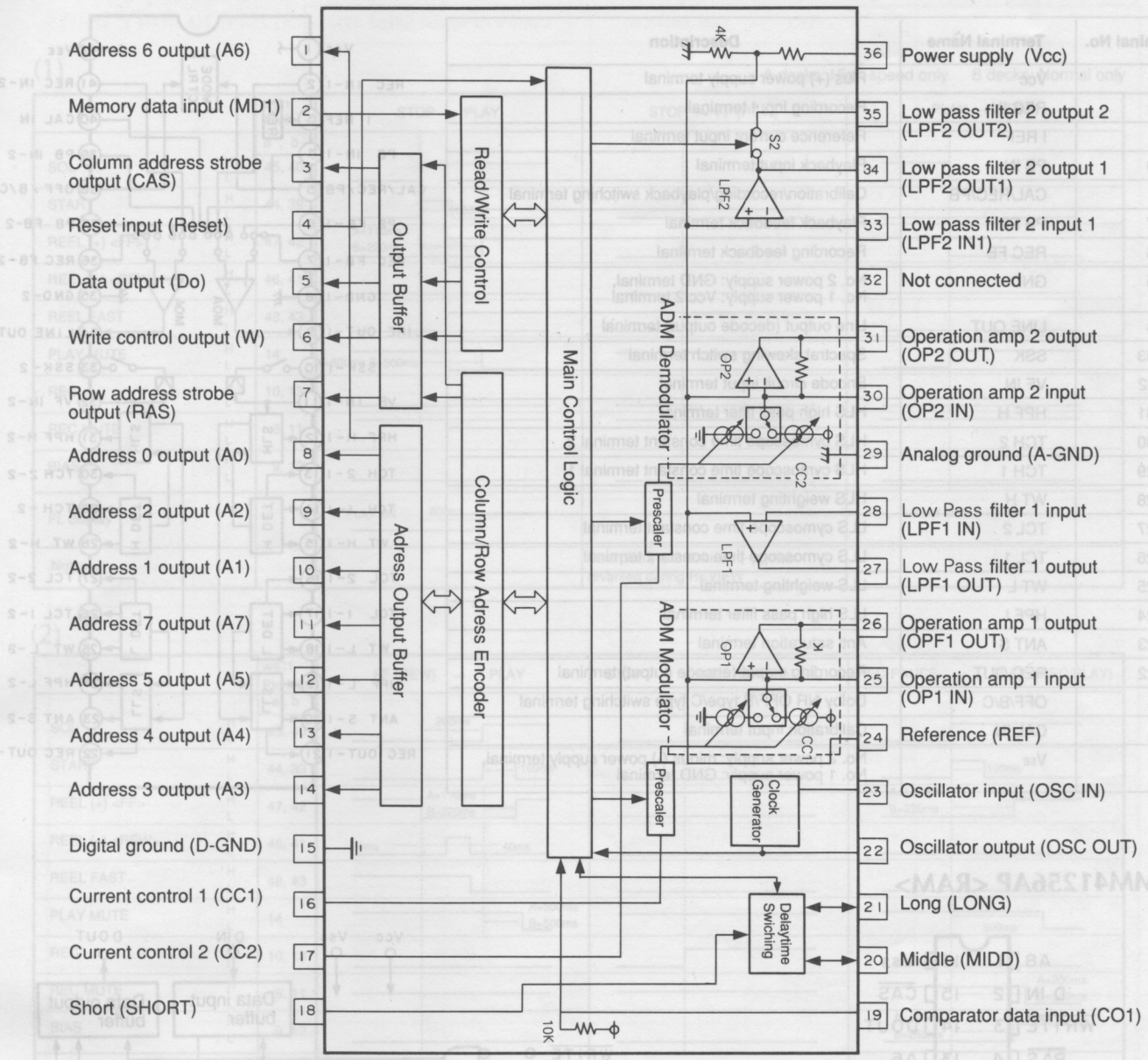
## • LC7566 <FL Tube Driver>



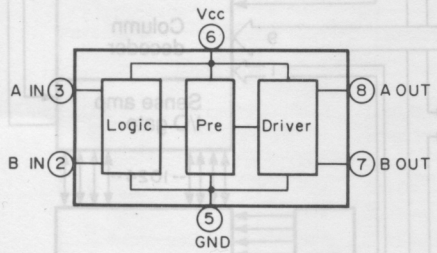

## •BA6124 <LED Drive>



## • M50199P <Digital Delay>


Address 6 output (A6) 1
Memory data input (MD1) 2
Column address strobe output (CAS) 3
Reset input (Reset) 4
Data output (Do) 5
Write control output (W) 6
Row address strobe output (RAS) 7
Address 0 output (A0) 8
Address 2 output (A2) 9
Address 1 output (A1) 10
Address 7 output (A7) 11
Address 5 output (A5) 12
Address 4 output (A4) 13
Address 3 output (A3) 14
Digital ground (D-GND) 15
Current control 1 (CC1) 16
Current control 2 (CC2) 17
Short (SHORT) 18
Output Buffer
Read/Write Control
Adress Output Buffer
Column/Row Adress Encoder
Main Control Logic
ADM Demodulator
ADM Modulator
Prescaler
Prescaler
Clock Generator
Delaytime Swiching
4K
10K
S2
LPF2
OP2
CC2
LPF1
OP1
CC1
36 Power supply (Vcc)
35 Low pass filter 2 output 2 (LPF2 OUT2)
34 Low pass filter 2 output 1 (LPF2 OUT1)
33 Low pass filter 2 input 1 (LPF2 IN1)
32 Not connected
31 Operation amp 2 output (OP2 OUT)
30 Operation amp 2 input (OP2 IN)
29 Analog ground (A-GND)
28 Low Pass filter 1 input (LPF1 IN)
27 Low Pass filter 1 output (LPF1 OUT)
26 Operation amp 1 output (OPF1 OUT)
25 Operation amp 1 input (OP1 IN)
24 Reference (REF)
23 Oscillator input (OSC IN)
22 Oscillator output (OSC OUT)
21 Long (LONG)
20 Middle (MIDD)
19 Comparator data input (CO1)

## •BA6208 <Motor Drive>

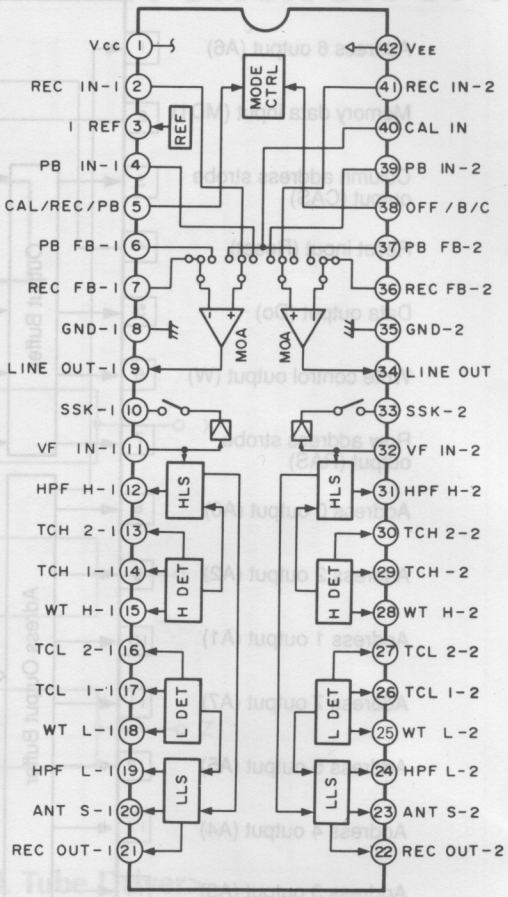



| Input | | Output | | Output Mode |
|---|---|---|---|---|
| Input A | Input B | Output A | Output B | |
| 1 | 1 | L | L | Motor Short |
| 1 | 0 | H | L | Normal Turn |
| 0 | 1 | L | H | Reverse Turn |
| 0 | 0 | – | – | Motor Open |

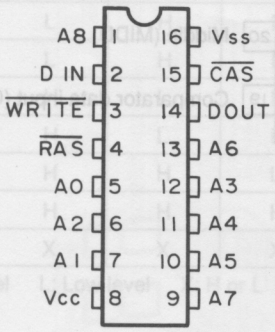
1: More than 2.0V, 0: Less than 0.8V

## •CX20188 <Dolby Noise Reduction>

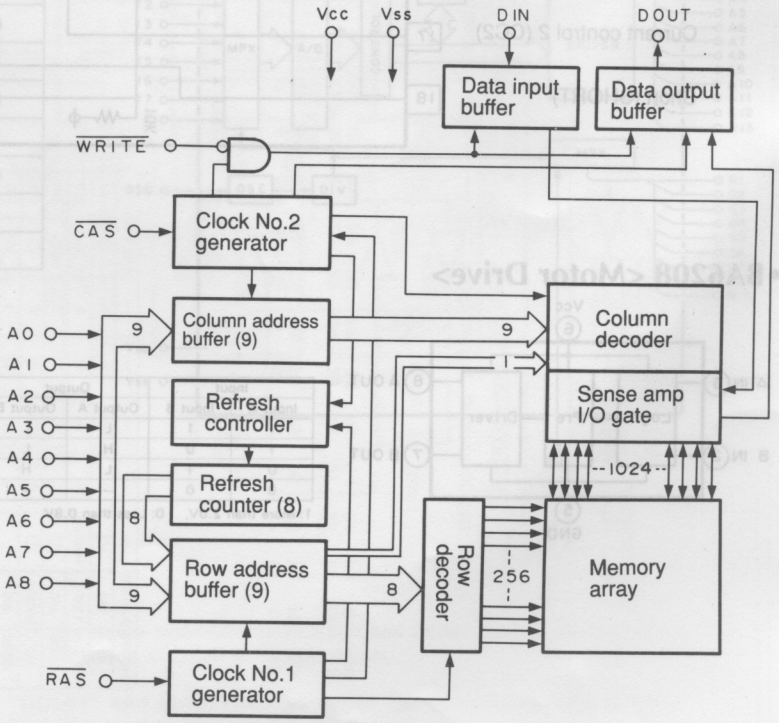
| Terminal No. | Terminal Name | Description |
|---|---|---|
| 1 | Vcc | Plus (+) power supply terminal |
| 2, 41 | REC IN | Recording input terminal |
| 3 | I REF | Reference current input terminal |
| 4, 39 | PB IN | Playback input terminal |
| 5 | CAL/REC/PB | Calibration/recording/playback switching terminal |
| 6, 37 | PB FB | Playback feedback terminal |
| 7, 36 | REC FB | Recording feedback terminal |
| 8, 35 | GND | No. 2 power supply: GND terminal,<br>No. 1 power supply: Vcc/2 terminal |
| 9, 34 | LINE OUT | Line output (decode output) terminal |
| 10, 33 | SSK | Spectral skewing switch terminal |
| 11, 32 | VF IN | Encode circuit input terminal |
| 12, 31 | HPF H | HLS high pass filter terminal |
| 13, 30 | TCH 2 | HLS cymoscope time constant terminal 2 |
| 14, 29 | TCH 1 | HLS cymoscope time constant terminal 1 |
| 15, 28 | WT H | HLS weighting terminal |
| 16, 27 | TCL 2 | LLS cymoscope time constant terminal |
| 17, 26 | TCL 1 | LLS cymoscope time constant terminal |
| 18, 25 | WT L | LLS weighting terminal |
| 19, 24 | HPF L | LLS high pass filter terminal |
| 20, 23 | ANT S | Anti saturation terminal |
| 21, 22 | REC OUT | Recording output (encode output) terminal |
| 38 | OFF/B/C | Dolby NR OFF/B type/C type switching terminal |
| 40 | CAL IN | Calibration input terminal |
| 42 | $V_{EE}$ | No. 2 power supply: minus (-) power supply terminal,<br>No. 1 power supply: GND terminal |




## •TMM41256AP <RAM>




| | |
|---|---|
| A0 ~ A8 | Address input |
| $\overline{CAS}$ | Column address strobe |
| $D_{IN}$ | Data input |
| $D_{OUT}$ | Data output |
| $\overline{RAS}$ | Row address strobe |
| $\overline{WRITE}$ | Read/write input |
| $V_{CC}$ | Power supply terminal |
| $V_{SS}$ | Ground |



# 3. TIMING CHART OF SYSTEM CONTROL IC, M50754

(1)

A decks: High-speed only  B decks: Normal only

| | | wIC1 Pin No. | STOP → PLAY | STOP → FF (REW) | PLAY → STOP |
|---|---|---|---|---|---|
| | | a , b | | | |
| SOL | H<br>L | 45, 40 | | | |
| START | H<br>L | 44, 39 | 100ms | | |
| REEL (+) <FF> | H<br>L | 47, 42 | A=110ms<br>B=220ms | | |
| REEL (–) <REW> | H<br>L | 46, 41 | | | |
| REEL FAST | H<br>L | 48, 43 | | | |
| PLAY MUTE | H<br>L | 14 | A=500ms B=500ms | | |
| REC | H<br>L | 10, 13 | | | |
| REC MUTE | H<br>L | 8, 11 | | | |
| BIAS | H<br>L | 9, 12 | | | |
| FL display | | | PLAY ON 200ms | | PLAY OFF |
| Notes | | | | Reel plus (+) and minus (–) poles reversed during REVIEW | |

(2)

| | | wIC1 Pin No. | FF (REW) → PLAY | STOP → REC (REC PAUSE) | REC PAUSE → PLAY (REC/PLAY) |
|---|---|---|---|---|---|
| | | a , b | | | |
| SOL | H<br>L | 45, 40 | 200ms | | |
| START | H<br>L | 44, 39 | 100ms | | 100ms |
| REEL (+) <FF> | H<br>L | 47, 42 | A=110ms<br>B=220ms | | A=110ms<br>B=220ms |
| REEL (–) <REW> | H<br>L | 46, 41 | 20ms 40ms | | |
| REEL FAST | H<br>L | 48, 43 | | | |
| PLAY MUTE | H<br>L | 14 | A=500ms<br>B=500ms | | 500ms |
| REC | H<br>L | 10, 13 | | | |
| REC MUTE | H<br>L | 8, 11 | | | A=200ms<br>B=300ms |
| BIAS | H<br>L | 9, 12 | | | A=150ms<br>B=250ms |
| FL display | | | PLAY ON 200ms | REC ON<br>PAUSE OFF | PLAY and REC remain ON<br>PAUSE OFF |
| Notes | | | Reel plus (+) and minus (–) poles reversed during PREVIEW | 1. REC switch will not function while H.<br>2. With A decks, will not function while all REC f nctions are L. REC flashes if eve one is H. | |

(3)

| | | wIC1 Pin No. | PLAY → CUE (REVIEW) | CUE (REVIEW) → PLAY |
|---|---|---|---|---|
| | | a , b | | |
| SOL | H L | 45, 40 | 30ms | 200ms |
| START | H L | 44, 39 | 100ms | 100ms |
| REEL (+) <FF> | H L | 47, 42 | 230ms | A=110ms B=220ms |
| REEL (–) <REW> | H L | 46, 41 | | 20ms 40ms |
| REEL FAST | H L | 48, 43 | | |
| PLAY MUTE | H L | 14 | 500ms | A= B= } 500ms |
| REC | H L | 10, 13 | | |
| REC MUTE | H L | 8, 11 | | |
| BIAS | H L | 9, 12 | | |
| FL display | | | PLAY ON | PLAY ON 200ms |
| Notes | | | Reel plus (+) and minus (–) poles reversed during PREVIEW | Reel plus (+) and minus (–) poles reversed during PREVIEW |

* CUE and REVIEW are only available while FF or REW keys are pressed during PLAY. PLAY is resumed when the key s are released.

(4)

| | | wIC1 Pin No. | PLAY PAUSE → PLAY | PLAY → REC (Punch-in) | REC → PLAY (Punch-out) |
|---|---|---|---|---|---|
| | | a , b | | | |
| SOL | H L | 45, 40 | | | |
| START | H L | 44, 39 | 100ms | | |
| REEL (+) <FF> | H L | 47, 42 | A=110ms B=220ms | | |
| REEL (+) <FF> | H L | 46, 41 | | | |
| REEL FAST | H L | 48, 43 | | | |
| PLAY MUTE | H L | 14 | A=500ms B=500ms | 300ms | 300ms |
| REC | H L | 10, 13 | | | 200ms |
| REC MUTE | H L | 8, 11 | | 200ms | |
| BIAS | H L | 9, 12 | | 50ms | 10ms |
| FL display | | | PAUSE OFF PLAY remains ON | PLAY remains ON REC changes from flashing to ON (Note: See table 2) | PLAY remains ON REC changes from ON to flashing (Note: See table 2) |
| Notes | | | | Deck A only | Deck A only |

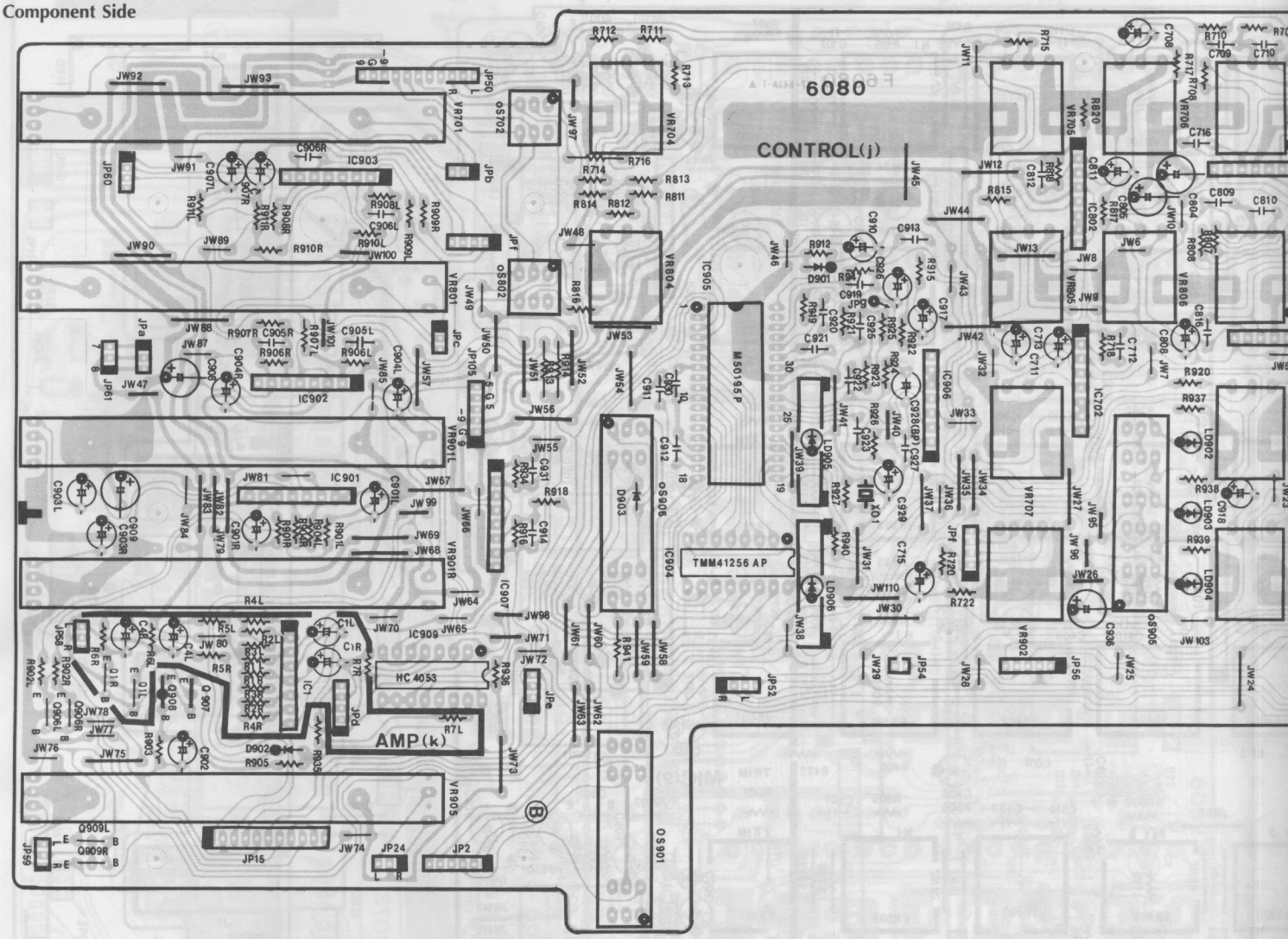
(5)

| | | wIC1 Pin No. | REC → FF (REW) | FF → REW (REW → FF) | FF → STOP (REW → STOP) |
|---|---|---|---|---|---|
| | | a , b | | | |
| SOL | H L | 45, 40 | | | |
| START | H L | 44, 39 | | | |
| REEL (+) <FF> | H L | 47, 42 | | | |
| REEL (–) <FF> | H L | 46, 41 | 400ms | 20ms 40ms 200ms | 20ms 40ms |
| REEL FAST | H L | 48, 43 | | | |
| PLAY MUTE | H L | 14 | | | |
| REC | H L | 10, 13 | A= B= } 500ms | | |
| REC MUTE | H L | 8, 11 | | | |
| BIAS | H L | 9, 12 | 10ms | | |
| FL display | | | PAUSE OFF PLAY OFF | | |
| Notes | | | Reel(+) and (–) poles are reversed during REVIEW | Reel (+) and (–) poles are reversed when switching from REW to FF. | Reel (+) and (–) poles are reversed when switching from REW to STOP. |

# 4. PARTS LOCATION OF BOARD

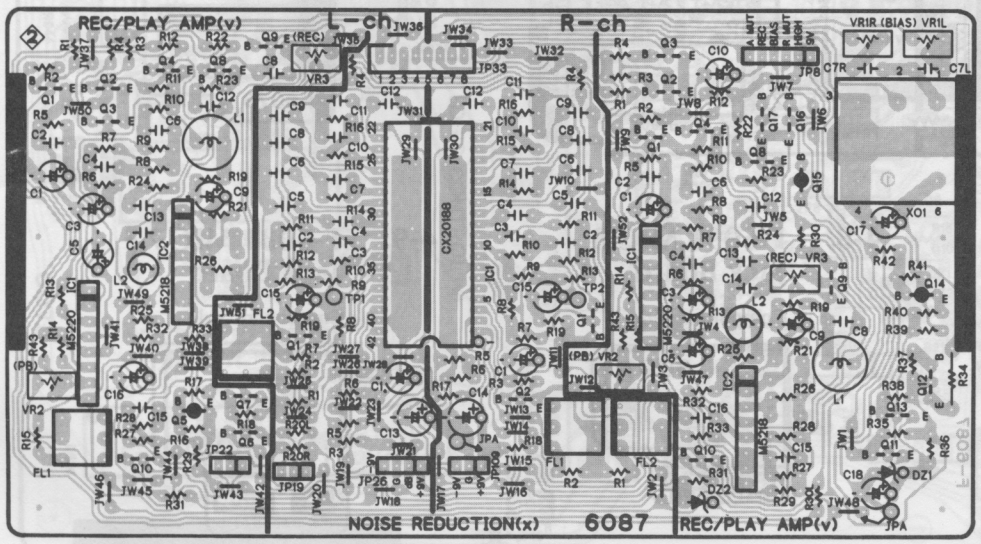
## 4-1. F-6080 Control Amp & Reverb Amp Board

**Component Side**



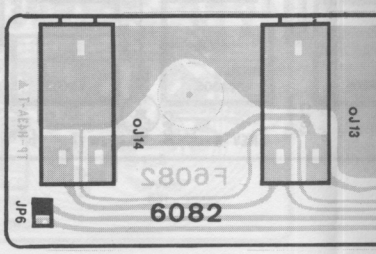

## 4-2. F-6087 REC/PLAY AMP & DOLBY Board

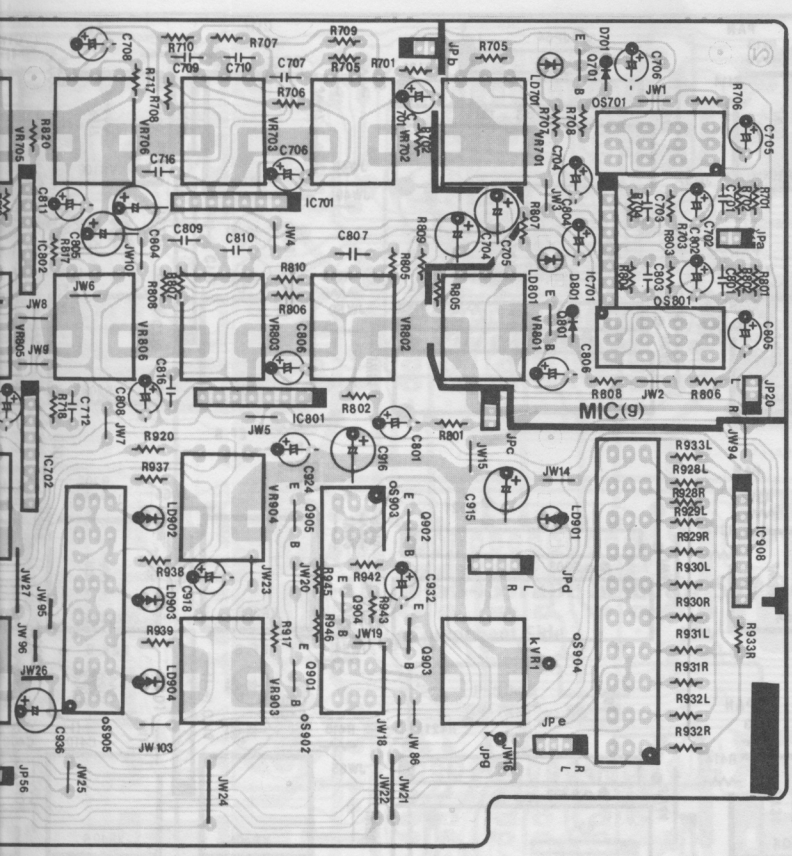
**Component Side**




## 4-3. F-6082 Head Phone

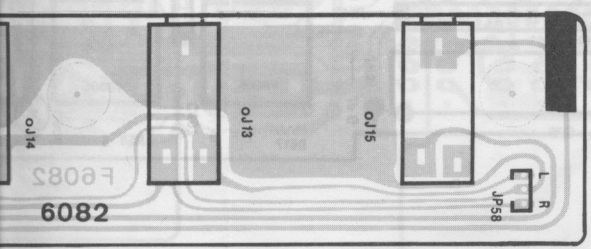
**Component Side**





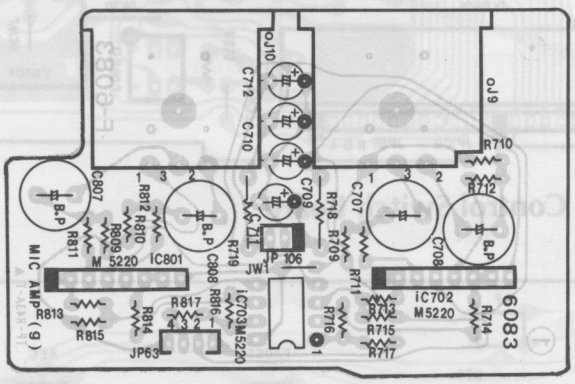

## F-6082 Head Phone Jack Board

Component Side



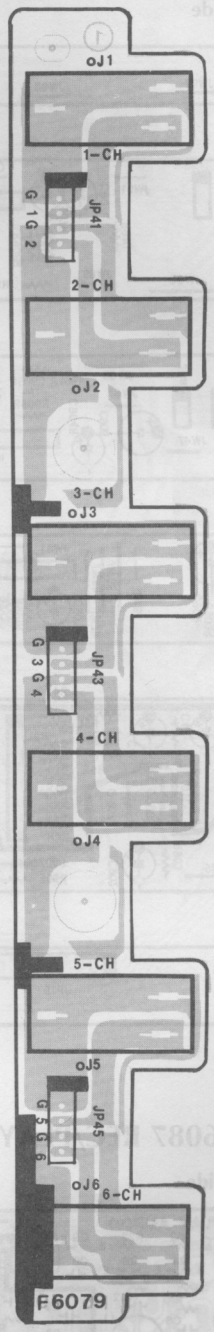

## 4-4. F-6083 MIC Balance AMP Board

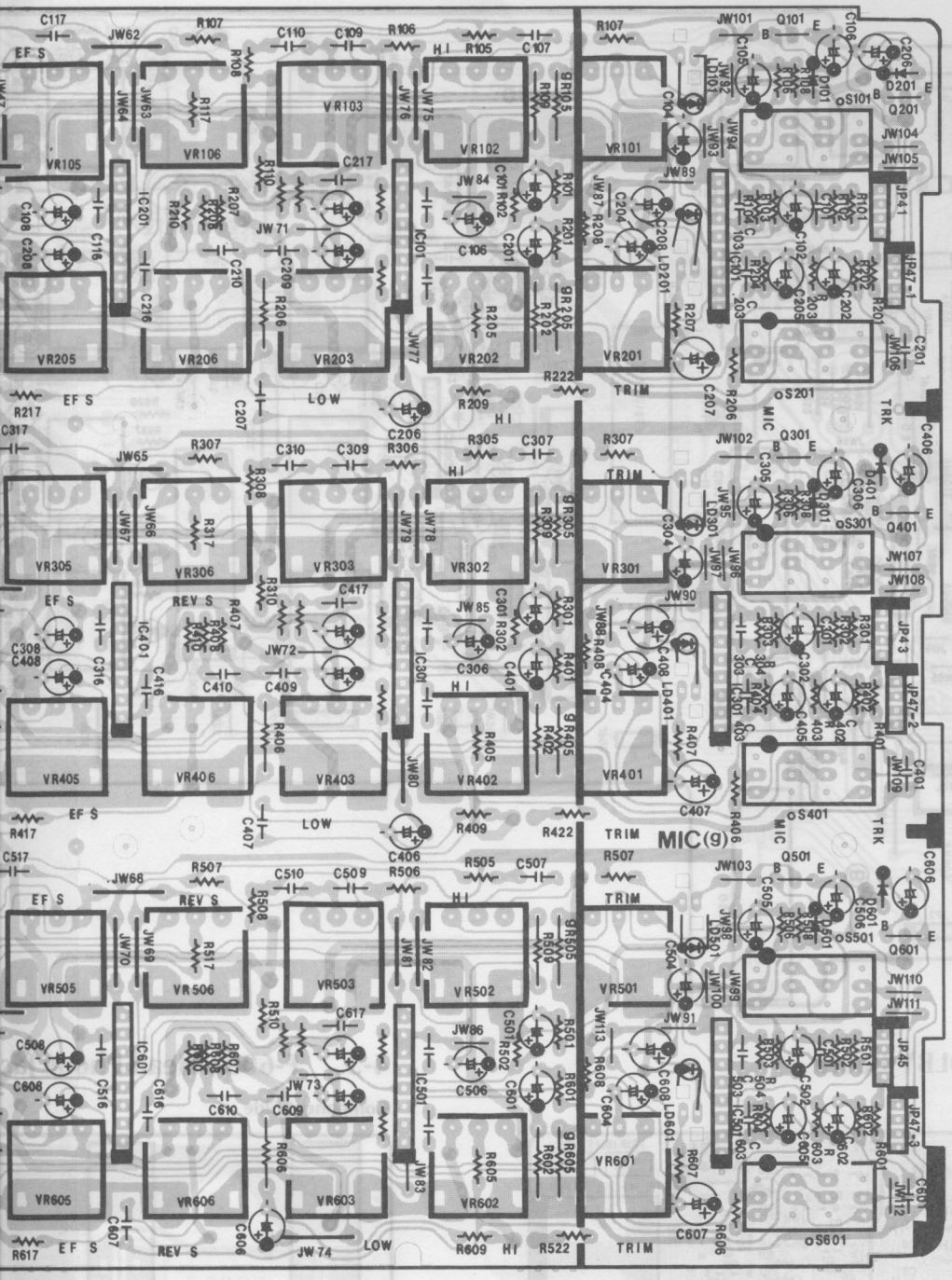
Component Side



## 4-6. F-6079 MIC Jack Board

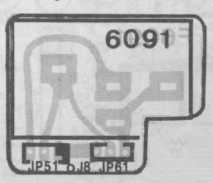
Component Side



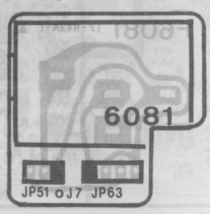

## 4-8. F-6091 MIC 8 Jack Board

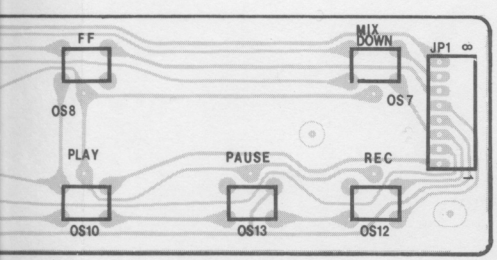
Component Side




## 4-9. F-6081 MIC 7 Jack Board

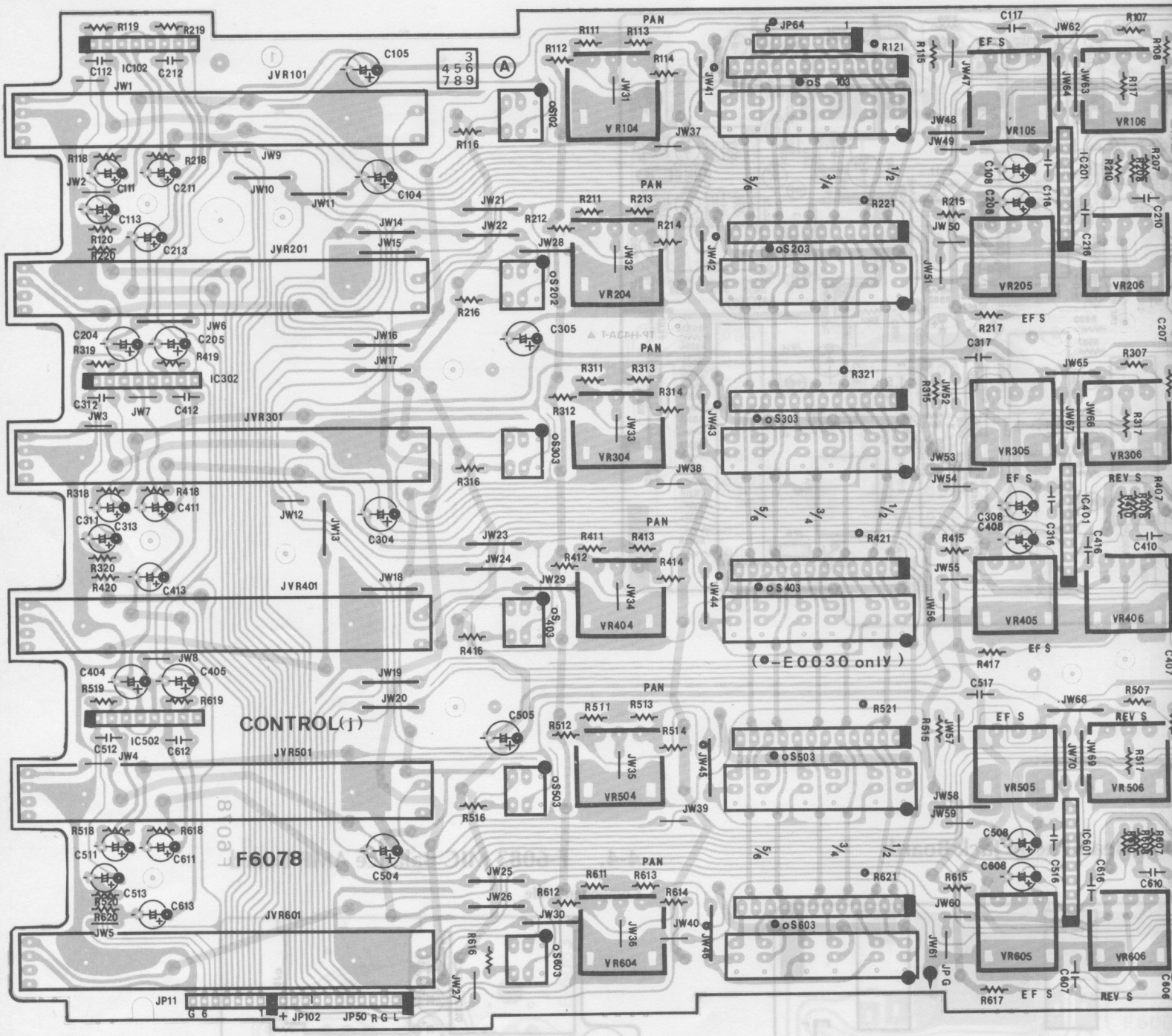
Component Side



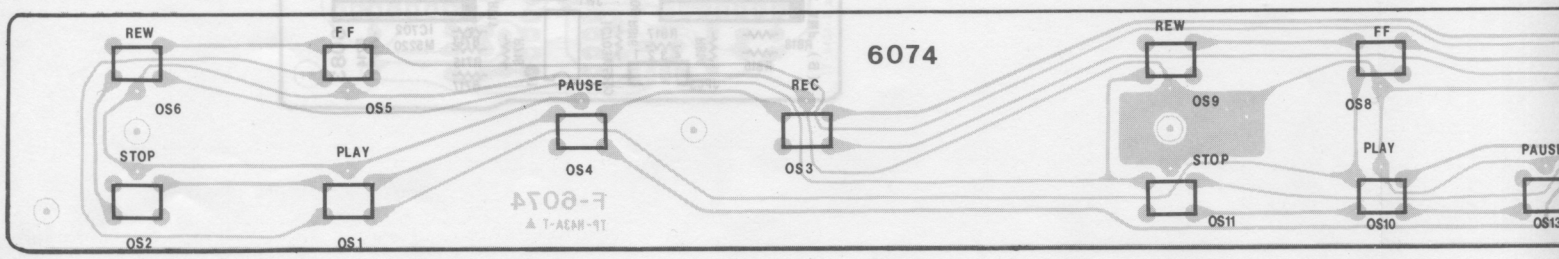
## 4-5. F-6078 MIC AMP & Control Amp Board

**Component Side**



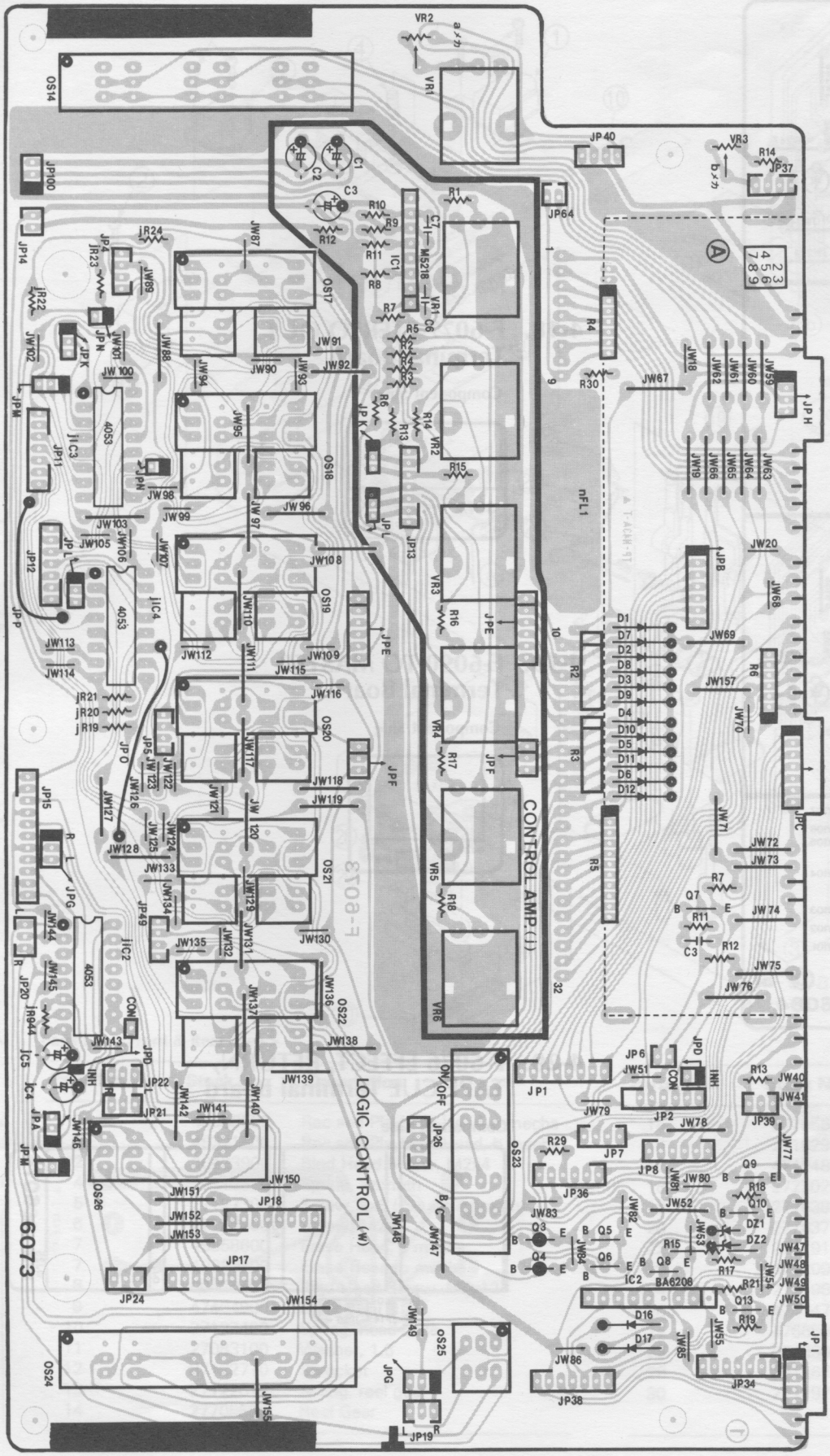

## 4-7. F-6074 Deck Control Switch Board

**Component Side**



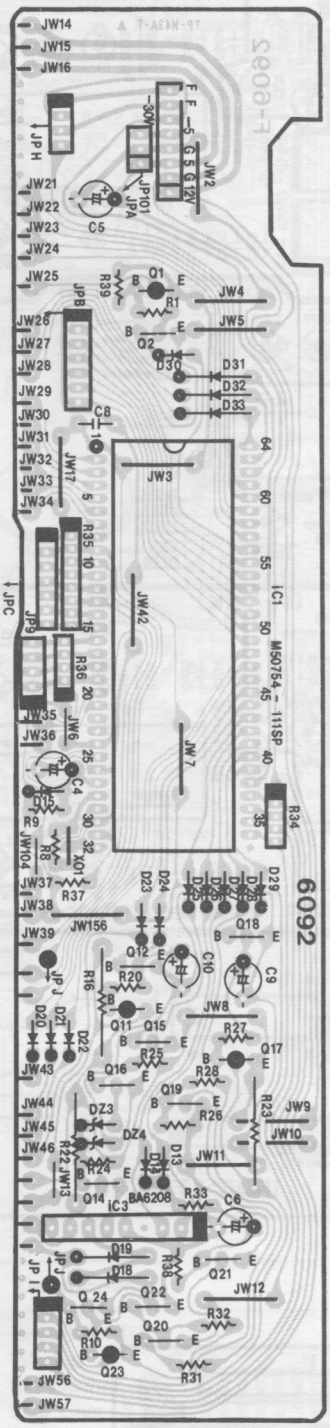
## 4-10. F-6073 Mechanism Control Switch Board

Component Side



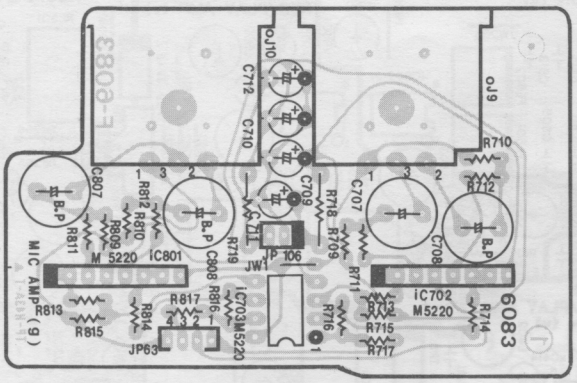

## 4-11. F-6092 Mecha Control Circuit Board

Component Side



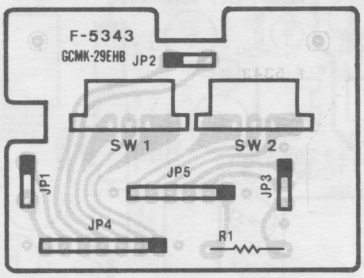
## 4-12. F-6083 MIC Balance AMP Board

Component Side



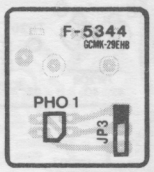

## 4-13. F-5343 Tape Selector SW Board

Component Side



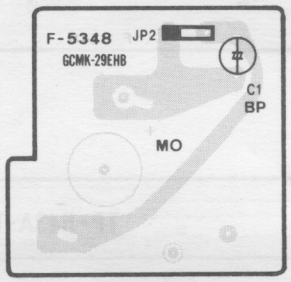

## 4-14. F-5344 Photo Coupler Board

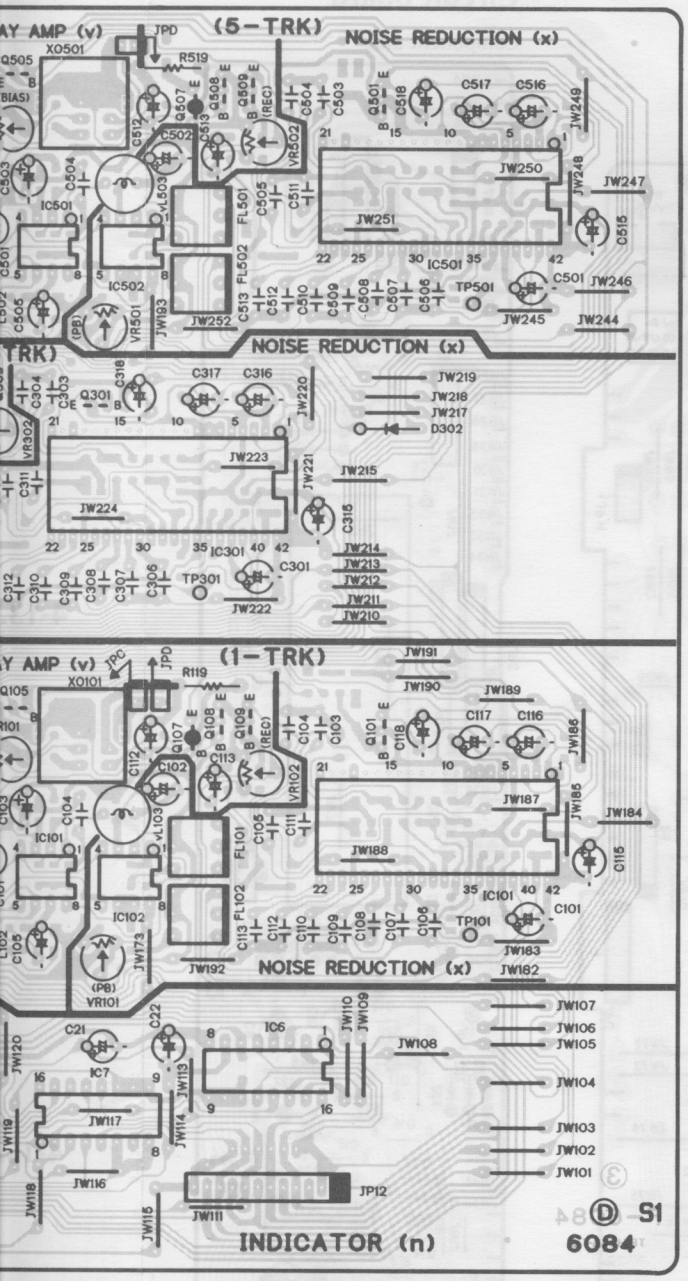
Component Side

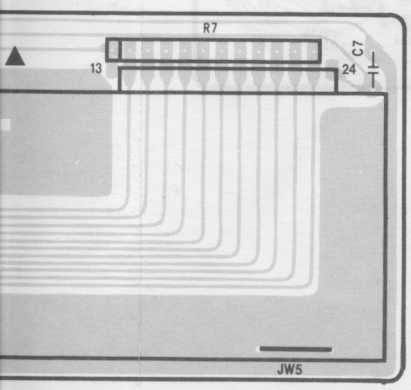



## 4-15. F-5348 Reel Motor Board

Component Side

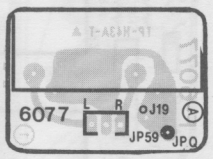




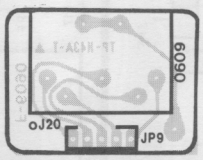

## 4-18. F-6077 STEREO OUT Terminal Board

Component Side



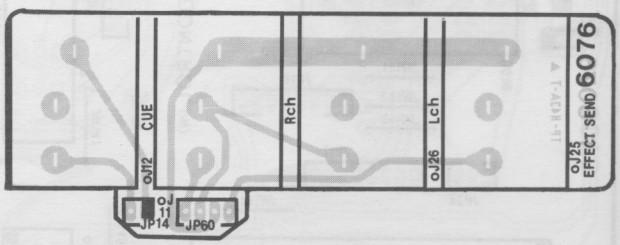

## 4-19. F-6090 TO MASTER Terminal Board

Component Side



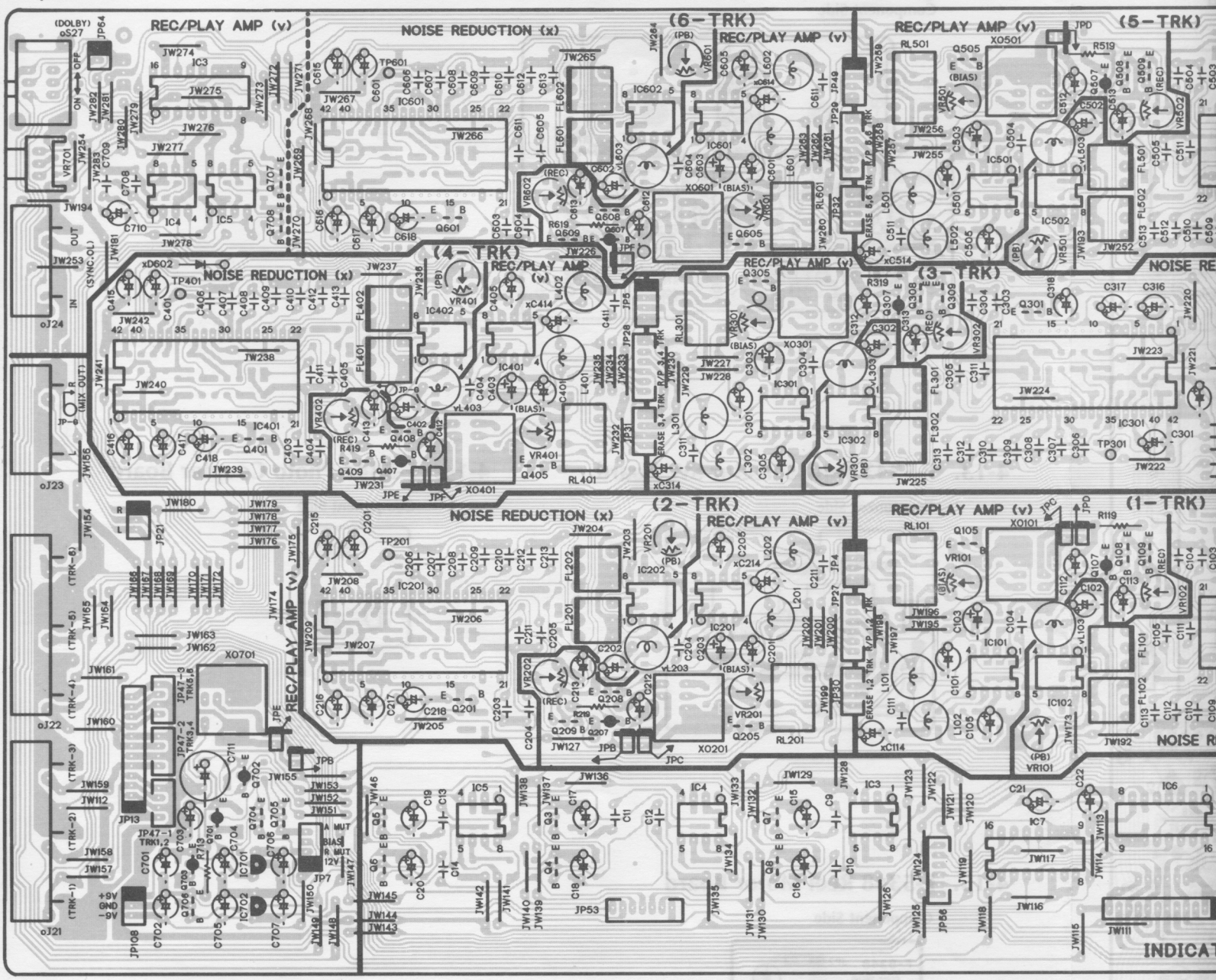

## 4-20. F-6076 EFFECT, RETURN, TAPE CUE Terminal Board

Component Side



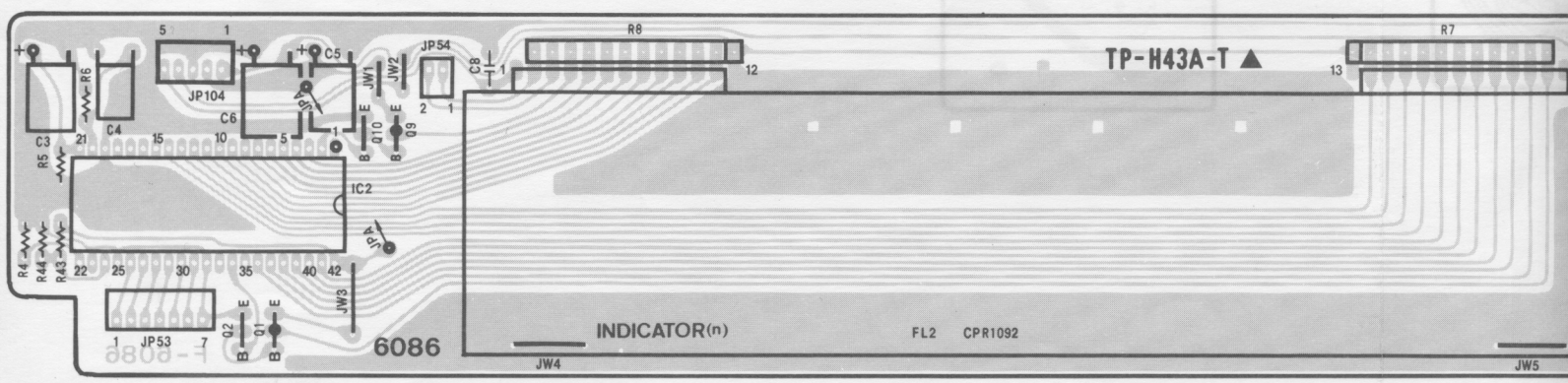
## 4-16. F-6084 REC/PLAY AMP & DOLBY Noise Reduction Board

**Component Side**



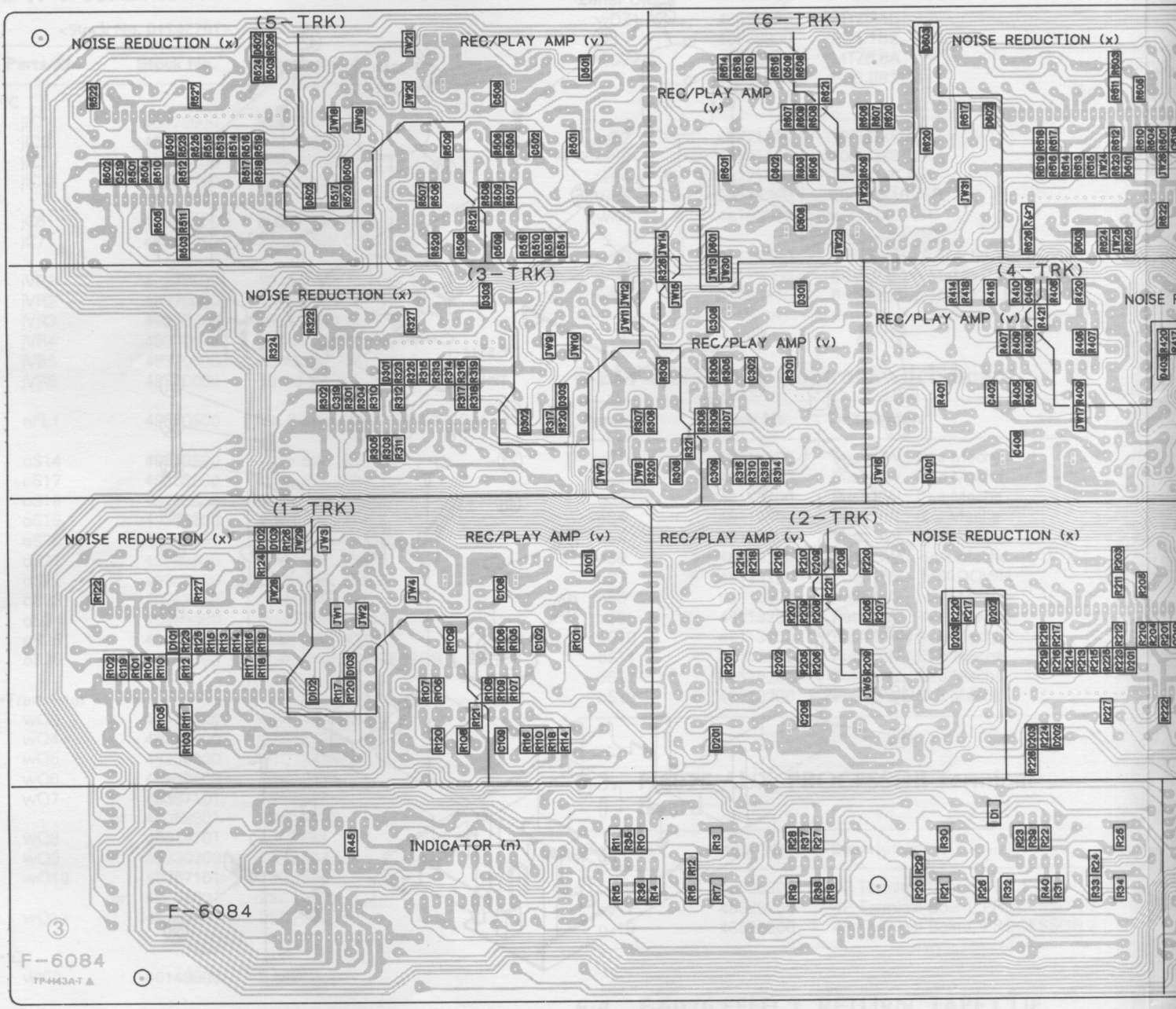

## 4-17. F-6086 INPUT/OUTPUT Level Meter Board

**Component Side**



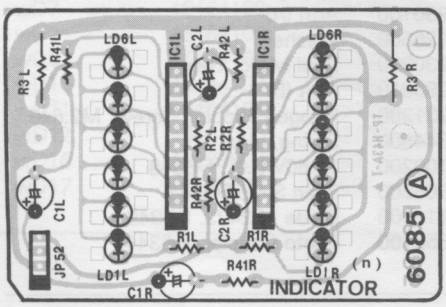
## 4-21. F6084 REC/PLAY AMP & DOLBY Noise Reduction Board

**Pattern Side <Chip Parts>**



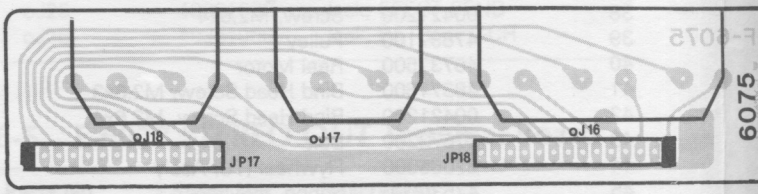

## 4-22. F-6085 STEREO OUT Level Meter Board

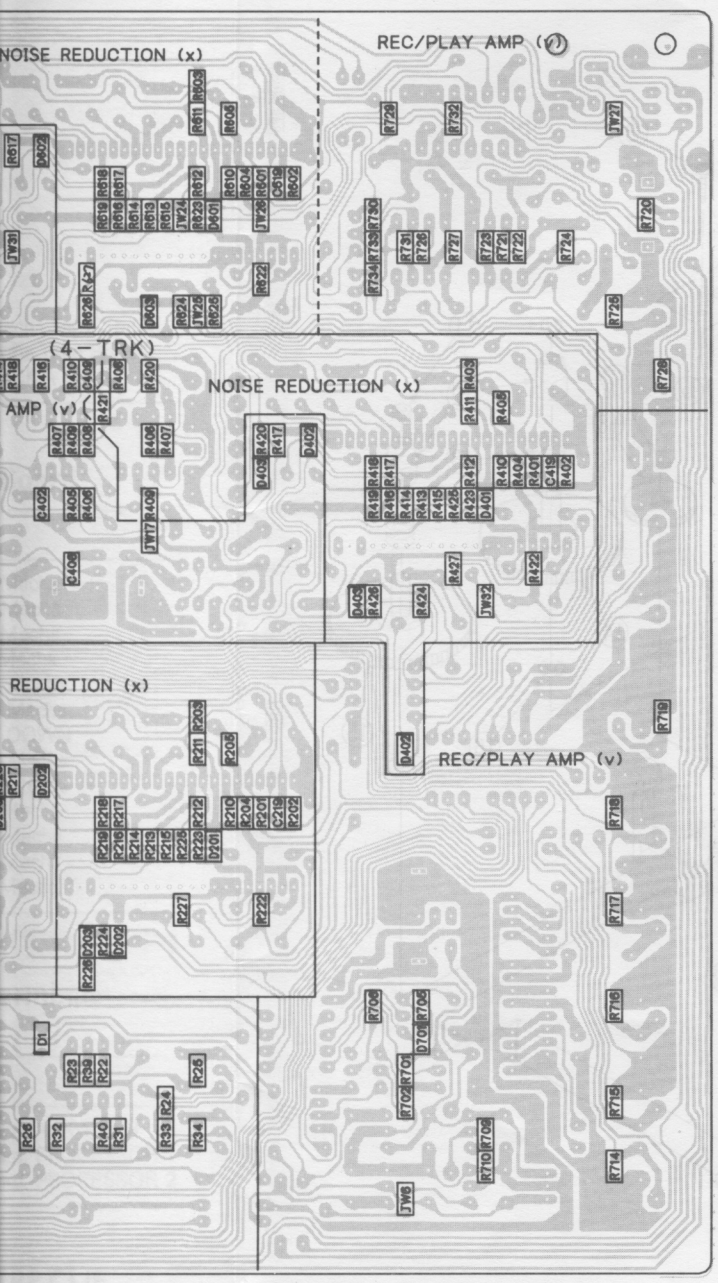
**Component Side**




## 4-23. F-6075 AUX, PROCESOR Terminal Board

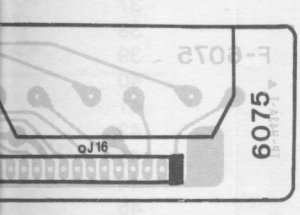
**Component Side**

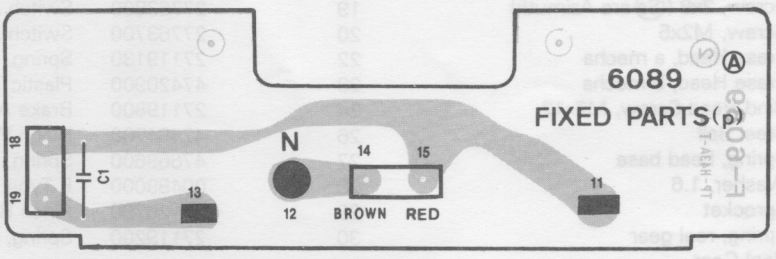





## 4-24. F-6089 Power Supply (Primary Side) Board

**Component Side**

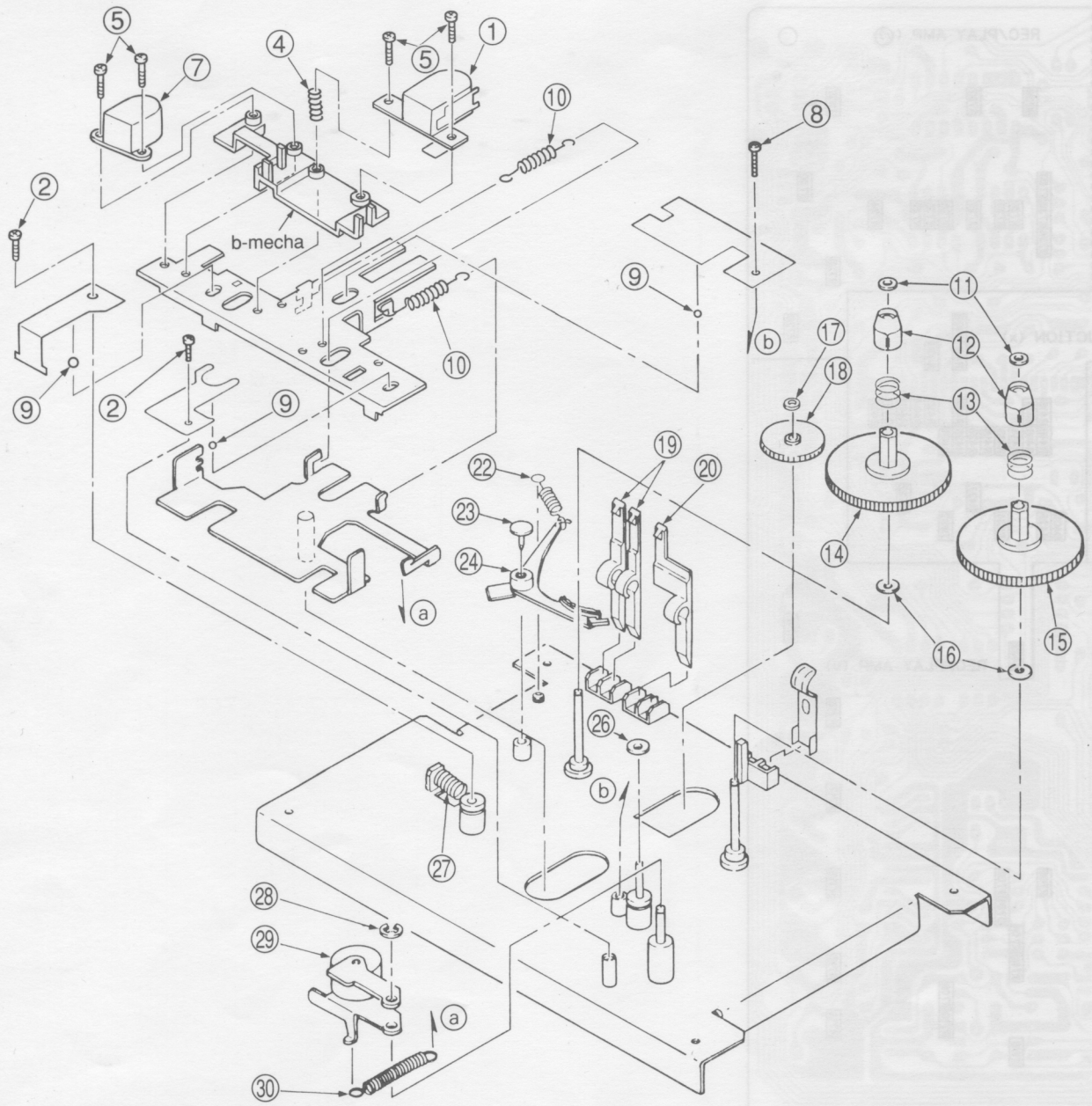


# 5. EXPLODED VIEW OF MECHANISM ASS'Y & PARTS LIST

## Front View of Mechanism Chassis

Rear Vie




Parts List <Front & Rear View>

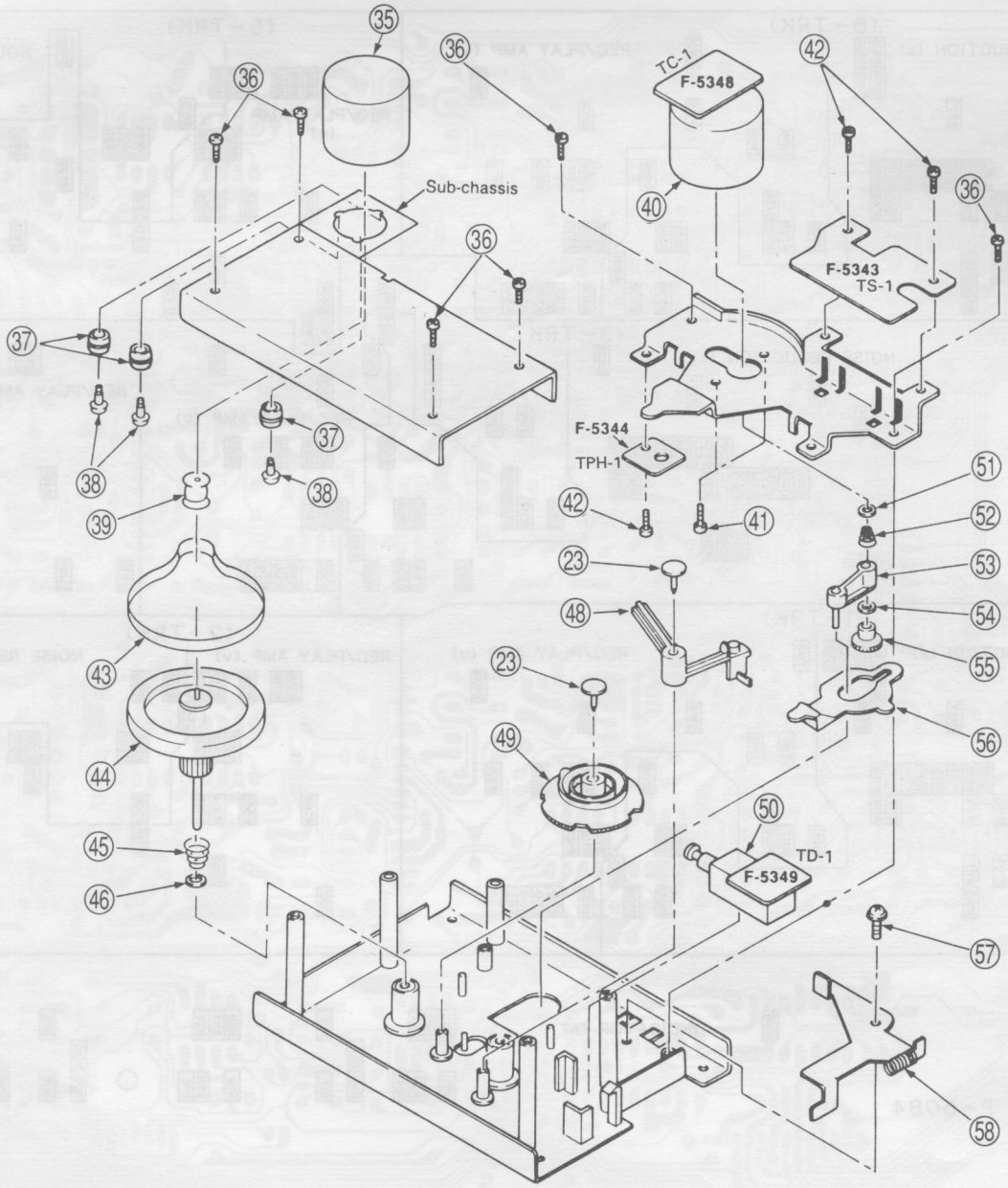
| Parts No. | Stock No. | Description |
|---|---|---|
| 1 | 49358500 | Rec and Playback Head, a mecha |
| 1 | 49321500 | Rec and Playback Head, b mecha |
| 2 | 00423900 | Bind Head Screw, M2x4 |
| 4 | 27119310 | Spring, azimuth |
| 5 | 27127300 | Screw, 2x8 (Ⓢa are Azimuth) |
| 6 | 27127400 | Screw, M2x5 |
| 7 | 49358600 | Erase Head, a mecha |
| 7 | 49321400 | Erase Head, b mecha |
| 8 | 00420900 | Bind Head Screw, M2x12 |
| 9 | 47404900 | Steel Ball |
| 10 | 27127400 | Spring, head base |
| 11 | 27083100 | Washer, 1.6 |
| 12 | 27122710 | Sprocket |
| 13 | 27122610 | Spring, reel gear |
| 14 | 27705500 | Reel Gear |

| Parts No. | Stock No. | Description |
|---|---|---|
| 15 | 27705600 | Reel Gear (TU) |
| 16 | 27182900 | Washer |
| 17 | 47404800 | Slit Washer, 1.6x3.5 |
| 18 | 27230200 | Idler Gear |
| 19 | 27763800 | Switch Arm (A) |
| 20 | 27763700 | Switch Arm (B), b mecha only |
| 22 | 27119130 | Spring, brake |
| 23 | 47420900 | Plastic Tack |
| 24 | 27119800 | Brake Arm |
| 26 | 47404700 | Nylon Washer, D2.5 |
| 27 | 47668600 | Spring, plunger solenoide |
| 28 | 00489000 | E Type Washer, D=2 |
| 29 | 27126700 | Pinch Roller Ass'y (TU) |
| 30 | 27119200 | Spring, pinch roller (TU) |

| Parts No. |
|---|
| 35 |
| 35 |
| 36 |
| 37 |
| 38 |
| 39 |
| 40 |
| 41 |
| 42 |
| 43 |
| 44 |
| 45 |
| 46 |
| 48 |

# S LIST

## Rear View of Mechanism Chassis




| Parts No. | Stock No. | Description |
|---|---|---|
| 35 | 16529601 | Capstan Motor Assy, b mecha |
| 35 | 16529301 | Capstan Motor Assy, a mecha |
| 36 | 00449100 | Pan Head Screw, M3x6 |
| 37 | 27459800 | Bushing |
| 38 | 00421200 | Screw, M2.6x4 |
| 39 | 47897100 | Pulley |
| 40 | 46737500 | Reel Motor |
| 41 | 48371600 | Bind Head Screw, M2.6x3 |
| 42 | 00421200 | Bind Head Screw, M2.6x4 |
| 43 | 27673200 | Belt |
| 44 | 27665000 | Flywheel (TU) Ass'y |
| 45 | 47530000 | Spring, flywheel |
| 46 | 47404600 | Washer, 2.5x4 |
| 48 | 27770000 | Lock Arm (A) |

| Parts No. | Stock No. | Description |
|---|---|---|
| 49 | 47283840 | Assist Gear (A) |
| 50 | 47292610 | Plunger Solenoid |
| 51 | 47497100 | Washer |
| 52 | 47530000 | Spring |
| 53 | 27230100 | Arm (A) |
| 54 | 27126500 | Washer |
| 55 | 27230300 | Reel Motor Gear |
| 56 | 47293810 | Arm (B) |
| 57 | 46731200 | Flanged Tapping Screw, M2.6x8 |
| 58 | 47644500 | Spring, eject |
| TC-1 | 48100200 | 1μ 50V E.B., F-5348 |
| TS-1 | 48368200 | Push SW., F-5343 |
| TD-1 | 03111600 | Diode 1S2473, F-5349 |
| TPH-1 | 49356100 | Photo Coupler, F-5344 |

# 6. PARTS LIST OF BOARD

## 6-1. F-6073 Mecha Control Switch Board

<Stock No. 01147701>

| Parts No. | Stock No. | Description |
|---|---|---|
| •IC | | |
| jIC1 | 46078900 | M5218L |
| jIC2 | 48353100 | µPD4053BC |
| jIC3 | 48353100 | µPD4053BC |
| jIC4 | 48353100 | µPD4053BC |
| jC6 | 48663000 | 220pF 50V C.C. |
| jC7 | 48663000 | 220pF 50V C.C. |
| jVR1 | 49370000 | 10 kΩ (A) V.R., TRK 1 |
| jVR2 | 49370000 | 10 kΩ (A) V.R., TRK 2 |
| jVR3 | 49370000 | 10 kΩ (A) V.R., TRK 3 |
| jVR4 | 49370000 | 10 kΩ (A) V.R., TRK 4 |
| jVR5 | 49370000 | 10 kΩ (A) V.R., TRK 5 |
| jVR6 | 49370000 | 10 kΩ (A) V.R., TRK 6 |
| nFL1 | 49360500 | FL. Display Tube CPR5372GM |
| oS14 | 49368500 | Push SW., RETURN |
| oS17 | 49368800 | Push SW., TRK 1 |
| oS18 | 49368800 | Push SW., TRK 2 |
| oS19 | 49368800 | Push SW., TRK 3 |
| oS20 | 49368800 | Push SW., TRK 4 |
| oS21 | 49368800 | Push SW., TRK 5 |
| oS22 | 49368800 | Push SW., TRK 6 |
| oS23 | 49368000 | Push SW., B/C |
| oS24 | 49368600 | Push SW., AUX 3 |
| oS25 | 49367900 | Push SW., b DECK |
| oS26 | 49368700 | Push SW., PROCESSOR 1, 2 |
| •Transistor | | |
| wQ3 | 48230000 | DTA143XS |
| wQ4 | 48230000 | DTA143XS |
| wQ5 | 48230200 | DTC124XS |
| wQ6 | 48230200 | DTC124XS |
| wQ7 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| wQ8 | 46614101 | 2SC3243 |
| wQ9 | 48230200 | DTC124XS |
| wQ10 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| wQ13 | 46359801 | 2SC2001 |
| •IC | | |
| wIC2 | 46149600 | BA6208 |
| •Diode | | |
| wD1 | 46464100 | 1SS133 |
| wD2 | 46464100 | 1SS133 |
| wD3 | 46464100 | 1SS133 |
| wD4 | 46464100 | 1SS133 |
| wD5 | 46464100 | 1SS133 |
| wD6 | 46464100 | 1SS133 |
| wD7 | 46464100 | 1SS133 |
| wD8 | 46464100 | 1SS133 |
| wD9 | 46464100 | 1SS133 |
| wD10 | 46464100 | 1SS133 |
| wD11 | 46464100 | 1SS133 |
| wD12 | 46464100 | 1SS133 |
| wD16 | 48123600 | 11E2 |
| wD17 | 48123600 | 11E2 |
| •Zener Diode | | |
| wDZ1 | 48552100 | MTZ5.1B |
| or | 48630800 | RD5.1B2 |
| wDZ2 | 48552900 | MTZ6.8A |
| or | 48631900 | RD6.8B1 |
| wR2 | 48771100 | 100kΩX6 A.R. |
| wR3 | 48771100 | 100kΩX6 A.R. |
| wR4 | 48771100 | 100kΩX6 A.R. |
| wR5 | 48778500 | 100kΩX10 A.R. |
| wR6 | 48769500 | 4.7 kΩX6 A.R. |
| wVR2 | 48119000 | 10K S.V.R., A Mecha Tape Speed |
| wVR3 | 48118900 | 5K S.V.R., B Mecha Tape Speed |
| wVR1 | 49370200 | 5 kΩ (B) V.R., DECK A PITCH |

## 6-2. F-6074 Deck Control Switch Board

| Parts No. | Stock No. | Description |
|---|---|---|
| oS1 | 48113200 | Push SW., ▷ a Mecha |
| oS2 | 48113200 | Push SW., □ a Mecha |
| oS3 | 48113200 | Push SW., ○ a Mecha |
| oS4 | 48113200 | Push SW., ▯▯ a Mecha |
| oS5 | 48113200 | Push SW., ▷▷ a Mecha |
| oS6 | 48113200 | Push SW., ◁◁ a Mecha |
| oS7 | 48113200 | Push SW., MIX DOWN |
| oS8 | 48113200 | Push SW., ▷▷ b Mecha |
| oS9 | 48113200 | Push SW., ◁◁ b Mecha |
| oS10 | 48113200 | Push SW., ▷ b Mecha |
| oS11 | 48113200 | Push SW., □ b Mecha |
| oS12 | 48113200 | Push SW., ○ b Mecha |
| oS13 | 48113200 | Push SW., ▯▯ b Mecha |

## 6-3. F-6075 AUX, PROCESSOR Terminal Board

| Parts No. | Stock No. | Description |
|---|---|---|
| oJ16 | 48528300 | 6P Terminal Board, AUX 1, 2, 3 |
| oJ17 | 48528200 | 4P Terminal Board, PROCESSOR 1 |
| oJ18 | 48528200 | 4P Terminal Board, PROCESSOR 2 |

## 6-4. F-6076 EFFECT, RETURN, TAPE CUE Terminal Board

| Parts No. | Stock No. | Description |
|---|---|---|
| oJ11 | 49361000 | Jack, RETURN R-CH |
| oJ12 | 49361000 | Jack, TAPE CUE OUT |
| oJ25 | 49361000 | Jack, EFECT SEND |
| oJ26 | 49361000 | Jack, RETURN L-CH |

## 6-5. F-6077 STEREO OUT Terminal Board

| Parts No. | Stock No. | Description |
|---|---|---|
| oJ19 | 49361200 | 2P Pin Jack Ass'y, STEREO OUT |

## 6-6. F-6078 MIC AMP & Control Board

<Stock No. 01148201>

| Parts No. | | Stock No. | Description |
|---|---|---|---|
| •Transistor | | | |
| gQ101 | | 48171600 | DTC114YS |
| •IC | | | |
| gIC101 | | 46288800 | M5220L |
| | or | 49395000 | NJM2068L-D |
| •Diode | | | |
| gD101 | | 46464100 | 1SS133 |
| gLD101 | | 46470200 | SEL2210S |
| gC101 | | 48663800 | 1000pF 50V C.C. |
| gC103 | | 48659000 | 15pF 50V C.C. |
| gVR101 | | 49369700 | 10 kΩ (C) V.R., TRIM |
| •IC | | | |
| jIC101 | | 46078900 | M5218L |
| jIC102 | | 46078900 | M5218L |
| jC112 | | 48662600 | 100pF 50V C.C. |
| jC116 | | 48659000 | 15pF 50V C.C. |
| jVR101 | | 49370400 | 10KB V.R., LEVEL |
| jVR102 | | 49369800 | 50 kΩ (B) V.R., HIGH |
| jVR103 | | 49369800 | 50 kΩ (B) V.R., LOW |
| jVR104 | | 49369900 | 10 kΩ (B) V.R., PAN |
| jVR105 | | 49370000 | 10 kΩ (A) V.R., EFF SEND |
| jVR106 | | 49370000 | 10 kΩ (A) V.R., REVERB SEND |
| oS101 | | 49369000 | Push SW., INPUT SELECTOR |
| oS102 | | 49367800 | Push SW., REC SELECTOR |

## 6-7. F-6079 MIC Jack Board

| Parts No. | Stock No. | Description |
|---|---|---|
| oJ1 | 49360800 | Jack , MIC 1 |
| oJ2 | 49360800 | Jack , MIC 2 |
| oJ3 | 49360800 | Jack , MIC 3 |
| oJ4 | 49360800 | Jack , MIC 4 |
| oJ5 | 49360800 | Jack , MIC 5 |
| oJ6 | 49360800 | Jack , MIC 6 |

## 6-8. F-6080 Control AMP & Reverb Amp Board

<Stock No. 01148401>

| Parts No. | | Stock No. | Description |
|---|---|---|---|
| •Transistor | | | |
| gQ701 | | 48171600 | DTC114YS |
| gQ801 | | 48171600 | DTC114YS |
| •IC | | | |
| gIC701 | | 46288800 | M5220L |
| | or | 49395000 | NJM2068L-D |
| •Diode | | | |
| gD701 | | 46464100 | 1SS133 |
| gD801 | | 46464100 | 1SS133 |

<F-6080>

| Parts No. | | Sotck No. | Descriptin |
|---|---|---|---|
| gLD701 | | 46470200 | SEL2210S |
| gLD801 | | 46470200 | SEL2210S |
| gC701 | | 48663800 | 1000pF 50V C.C. |
| gC703 | | 48659000 | 15pF 50V C.C. |
| gC801 | | 48663800 | 1000pF 50V C.C. |
| gC803 | | 48659000 | 15pF 50V C.C. |
| gVR701 | | 49369700 | 10 kΩ (C) V.R., INPUT 7 |
| gVR801 | | 49369700 | 10 kΩ (C) V.R., INPUT 8 |
| •Transistor | | | |
| jQ901 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| jQ902 | | 46719900 | DTC124ES |
| jQ903 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| jQ904 | | 46719900 | DTC124ES |
| jQ905 | | 48230000 | DTA143XS |
| jQ906 | | 48230400 | DTC143TS |
| jQ907 | | 48230000 | DTA143XS |
| jQ908 | | 46367001 | 2SA1115 |
| | or | 48058601 | 2SA 933S |
| jQ909 | | 48230400 | DTC143TS |
| •IC | | | |
| jIC701 | | 46078900 | M5218L |
| jIC702 | | 46078900 | M5218L |
| jIC801 | | 46078900 | M5218L |
| jIC802 | | 46078900 | M5218L |
| jIC901 | | 46078900 | M5218L |
| jIC902 | | 46078900 | M5218L |
| jIC903 | | 46078900 | M5218L |
| jIC904 | | 49356600 | TMM41256AP-15 |
| | or | 49374200 | TMM41256AP-12 |
| jIC905 | | 49432900 | M50199P |
| jIC906 | | 48449300 | M5233L |
| jIC907 | | 46078900 | M5218L |
| jIC908 | | 46078900 | M5218L |
| jIC909 | | 48353100 | µPD4053BC |
| jXO1 | | 49334900 | Quartz Element |
| •Diode | | | |
| jD901 | | 46464100 | 1SS133 |
| jD902 | | 46464100 | 1SS133 |
| jD903 | | 46464100 | 1SS133 |
| •LED | | | |
| jLD901 | | 46470200 | SEL2210S, SOLO |
| jLD902 | | 46470200 | SEL2210S, D.F.1 |
| jLD903 | | 46470200 | SEL2210S, D.F.2 |
| jLD904 | | 46470200 | SEL2210S, D.F.3 |
| jLD905 | | 48849300 | SEL3913K, MTR |
| jLD906 | | 48849300 | SEL3913K, HIFI |
| jC712 | | 48662600 | 100pF 50V C.C. |
| jC716 | | 48659000 | 15pF 50V C.C. |
| jC812 | | 48662600 | 100pF 50V C.C. |
| jC816 | | 48659000 | 15pF 50V C.C. |
| jC905 | | 48662600 | 100pF 50V C.C. |
| jC906 | | 48662600 | 100pF 50V C.C. |
| jC911 | | 48088400 | 0.1µF 50V F.C. |
| jC912 | | 48088400 | 0.1µF 50V F.C. |
| jC913 | | 48748400 | 0.1µF 50V C.C |
| jC914 | | 48662600 | 100pF 50V C.C. |
| jC920 | | 48090000 | 0.47µF 50V F.C. |
| jC921 | | 48088400 | 0.1µF 50V F.C. |
| jC922 | | 48663500 | 560pF 50V C.C. |
| jC923 | | 48088400 | 0.1µF 50V F.C. |

<F-6080>

| Parts No. | Stock No. | Description |
|---|---|---|
| jC928 | 48811400 | 4.7µF 16V E.B. |
| jC930 | 48662600 | 100pF 50V C.C. |
| jC931 | 48662600 | 100pF 50V C.C. |
| jVR701 | 49370400 | 10KB V.R., LEVEL |
| jVR702 | 49369800 | 50 kΩ (B) V.R., HIGH |
| jVR703 | 49369800 | 50 kΩ (B) V.R., LOW |
| jVR705 | 49370000 | 10 kΩ (A) V.R., EFFECT |
| jVR706 | 49370000 | 10 kΩ (A) V.R., REVERB |
| jVR707 | 49370000 | 10 kΩ (A) V.R., EFF SEND MASTER |
| jVR801 | 49370400 | 10KB V.R., LEVEL |
| jVR802 | 49369800 | 50 kΩ (B) V.R., HIGH |
| jVR803 | 49369800 | 50 kΩ (B) V.R., LOW |
| jVR805 | 49370000 | 10 kΩ (A) V.R., EFFECT |
| jVR806 | 49370000 | 10 kΩ (A) V.R., REVERB |
| jVR901 | 49370400 | 10KB V.R., MASTER VR. |
| jVR902 | 49370100 | 10 kΩ (A) V.R., EFFECT RETURN |
| jVR903 | 49370000 | 10 kΩ (A) V.R., RE. LEVEL |
| jVR905 | 49370500 | 10KBX2 V.R., ST MASTER |
| jVR704 | 49369900 | 10 kΩ (B) V.R., PAN, TRK 7 |
| jVR804 | 49369900 | 10 kΩ (B) V.R., PAN, TRK 8 |
| jVR904 | 49369900 | 10 kΩ (B) V.R., RE. EFFECT |
| •Transistor | | |
| kQ1 | 48230400 | DTC143TS |
| •IC | | |
| kIC1 | 48577000 | M5216L |
| or | 49385800 | NJM4556L |
| kVR1 | 49395200 | 10KBX2Ω V.R., HEADPHONE |
| oS701 | 49369000 | Push SW., INPUT SELECTOR 7 |
| oS702 | 49367800 | Push SW., SOLO 7 |
| oS801 | 49369000 | Push SW., INPUT SELECTOR 8 |
| oS802 | 49367800 | Push SW., SOLO 8 |
| oS901 | 49368100 | Push SW., COUNTER RESET/ A/B |
| oS902 | 49368300 | Push SW., METER FUNCTION/ SYNC |
| oS904 | 49368900 | Push SW., MONITOR SW. |
| oS905 | 49419900 | Push SW., REVERB FUNCTION |
| oS906 | 49368200 | Push SW., OUTPUT SELECTOR |

## 6-9. F-6081 MIC 7 Jack Board

| Parts No. | Stock No. | Description |
|---|---|---|
| oJ7 | 49360900 | Jack, MIC 7 |

## 6-10. F-6082 Head Phone Jack Board

| Parts No. | Stock No. | Description |
|---|---|---|
| oJ13 | 46265700 | Jack, HEAD PHONE 1 |
| oJ14 | 46265700 | Jack, HEAD PHONE 2 |
| oJ15 | 49360800 | Jack, PUNCH IN/OUT |

## 6-11. F-6083 MIC Balance AMP Board

<Stock No. 01148701>

| Parts No. | Stock No. | Description |
|---|---|---|
| •IC | | |
| gIC702 | 46288800 | M5220L |
| or | 49395000 | NJM2068L-D |
| gIC703 | 46638700 | M5220P R1AA |
| or | 49264000 | NJM2068D-D |
| gIC801 | 46288800 | M5220L RIAA |
| or | 49395000 | NJM2068L-D |
| gC707 | 48108800 | 47µF 50V E.B. |
| gC708 | 48108800 | 47µF 50V E.B. |
| gC807 | 48108800 | 47µF 50V E.B. |
| gC808 | 48108800 | 47µF 50V E.B. |
| oJ9 | 49362000 | Connector, MIC 7 |
| oJ10 | 49362000 | Connector, MIC 8 |

## 6-12. F-6084 REC/PLAY AMP & DOLBY NR Board

<Stock No. 01148801>

| Parts No. | Stock No. | Description |
|---|---|---|
| •Transistor | | |
| nQ3 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| nQ4 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| nQ5 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| nQ6 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| nQ7 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| nQ8 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| •IC | | |
| nIC3 | 07208900 | NJM4558D-X |
| or | 46673800 | M5218P |
| nIC4 | 07208900 | NJM4558D-X |
| or | 46673800 | M5218P |
| nIC5 | 07208900 | NJM4558D-X |
| or | 46673800 | M5218P |
| nIC6 | 48353100 | µPD4053BC |
| nIC7 | 48353100 | µPD4053BC |
| •Diode | | |
| nD1 | 46852000 | RLS-73 |
| nC9 | 48088400 | 0.1µF 50V F.C. |
| nC10 | 48088400 | 0.1µF 50V F.C. |
| nC11 | 48088400 | 0.1µF 50V F.C. |
| nC12 | 48088400 | 0.1µF 50V F.C. |
| nC13 | 48088400 | 0.1µF 50V F.C. |
| nC14 | 48088400 | 0.1µF 50V F.C. |
| oS27 | 46533500 | Slide SW., Dolby SW. |
| oJ21 | 49361300 | 3P Pin Jack Ass'y, TAPE OUT 1, 2, 3 |
| oJ22 | 49393500 | 3P Pin Jack Ass'y, TAPE OUT 4, 5, 6 |
| oJ23 | 49361200 | 2P Pin Jack Ass'y, MIX OUT |
| oJ24 | 49361200 | 2P Pin Jack Ass'y, SYNC OUT |

<F-6084>

| Parts No. | Stock No. | Description |
|---|---|---|
| •Transistor | | |
| vQ105 | 48230200 | DTC124XS |
| vQ107 | 48230000 | DTA143XS |
| vQ108 | 48230200 | DTC124XS |
| vQ109 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| vQ701 | 46367001 | 2SA1115 |
| or | 48058601 | 2SA 933S |
| vQ702 | 46367001 | 2SA1115 |
| or | 48058601 | 2SA 933S |
| vQ703 | 46367001 | 2SA1115 |
| or | 48058601 | 2SA 933S |
| vQ704 | 48171600 | DTC114YS |
| vQ705 | 48171600 | DTC114YS |
| vQ706 | 48171600 | DTC114YS |
| vQ707 | 48223100 | DTC114TS |
| vQ708 | 48223100 | DTC114TS |
| •IC | | |
| vIC3 | 48353100 | µPD4053BC |
| vIC4 | 07208900 | NJM4558D-X |
| or | 46673800 | M5218P |
| vIC5 | 07208900 | NJM4558D-X |
| or | 46673800 | M5218P |
| vIC101 | 46638700 | M5220P |
| or | 49264000 | NJM2068D-D |
| vIC701 | 46148600 | NJM78L05A |
| or | 48469000 | µPC78L05J |
| vIC702 | 46544000 | NJM79L05A |
| or | 49391300 | µPC79L05J |
| •Diode | | |
| vD101 | 46852000 | RLS-73 |
| vD102 | 46852000 | RLS-73 |
| vD103 | 46852000 | RLS-73 |
| vD701 | 46852000 | RLS-73 |
| vR119 | 46681300 | 10 Ω 1/4W F.R. |
| vR713 | 46681300 | 10 Ω 1/4W F.R. |
| vC709 | 48090000 | 0.47µF 50V F.C. |
| vXO101 | 49373000 | OSC BLOCK BO11BF |
| vXO701 | 49372900 | OSC BLOCK BO-11 |
| vL101 | 42904400 | Peaking Coil |
| vL102 | 48121500 | Inductor 2.7MH |
| vL103 | 42904400 | Peaking Coil |
| vVR101 | 48199900 | 100KB S.V.R., BIAS LEVEL, 1 |
| vVR102 | 46634300 | 10 kΩ S.V.R., REC LEVEL |
| vRL101 | 49391800 | Relay |
| vVR701 | 49370300 | 10 kΩ (A) V.R., SYNC LEVEL |
| •Transistor | | |
| xQ101 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| •IC | | |
| xIC101 | 49361700 | CX20188 |
| xIC102 | 07208900 | NJM4558D-X |
| or | 46673800 | M5218P RIAA OPAMP |

<F-6084>

| Parts No. | Stock No. | Description |
|---|---|---|
| •Diode | | |
| xD101 | 46852000 | RLS-73 |
| xD102 | 46852000 | RLS-73 |
| xD103 | 46852000 | RLS-73 |
| xD202 | 46852000 | RLS-73 |
| xD302 | 46464100 | 1SS133 |
| xD402 | 46852000 | RLS-73 |
| xD502 | 46852000 | RLS-73 |
| xD602 | 46464100 | 1SS133 |
| xC106 | 48090000 | 0.47µF 50V F.C. |
| xC107 | 48088800 | 0.15µF 50V F.C. |
| xC109 | 48089200 | 0.22µF 50V F.C. |
| xFL101 | 46948101 | DOLBY Filter |
| xFL102 | 46948101 | DOLBY Filter |
| xVR101 | 46634100 | 4.7 kΩ S.V.R., PB LEVEL |

## 6-13. F-6085 STEREO OUT Level Meter Board

| Parts No. | Stock No. | Description |
|---|---|---|
| •IC | | |
| nIC1 | 46129100 | BA6124 |
| •LED | | |
| nLD1 | 48835400 | SEL2910A, STEREO OUT LEVEL |
| nLD2 | 48835400 | SEL2910A, STEREO OUT LEVEL |
| nLD3 | 48835400 | SEL2910A, STEREO OUT LEVEL |
| nLD4 | 48835400 | SEL2910A, STEREO OUT LEVEL |
| nLD5 | 46470200 | SEL2210S, STEREO OUT LEVEL |
| nLD6 | 46470200 | SEL2210S, STEREO OUT LEVEL |

## 6-14. F-6086 INPUT/OUTPUT Level Meter Board

<Stock No. 01149001>

| Parts No. | Stock No. | Description |
|---|---|---|
| •Transistor | | |
| nQ1 | 48230100 | DTA143XS |
| nQ2 | 48230300 | DTC124XS |
| nQ9 | 48230100 | DTA143XS |
| nQ10 | 48230300 | DTC124XS |
| •IC | | |
| nIC2 | 49373300 | LC7566 FL |
| nFL2 | 49360400 | FL. Display Tube CPR1092GM |
| nR7 | 49361900 | 100 kΩX11 A.R. |
| nR8 | 49361900 | 100 kΩX11 A.R. |
| nC7 | 48745200 | 1µF 50V C.C. |
| nC8 | 48745200 | 1µF 50V C.C. |

## 6-15. F-6087 REC/PLAY AMP & DOLBY NR Board

<Stock No. 01149101>

| Parts No. | | Stock No. | Description |
|---|---|---|---|
| •Transistor | | | |
| vQ1 | | 46359801 | 2SC2001 |
| vQ2 | | 46581701 | 2SC1845 |
| vQ3 | | 46581701 | 2SC1845 |
| vQ4 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| vQ5 | | 46581601 | 2SA 992 |
| vQ6 | | 48230200 | DTC124XS |
| vQ7 | | 48230200 | DTC124XS |
| vQ8 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| vQ9 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| vQ10 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| vQ11 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| vQ12 | | 46359801 | 2SC2001 |
| vQ13 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| vQ14 | | 46367001 | 2SA1115 |
| | or | 48058601 | 2SA 933S |
| vQ15 | | 48230000 | DTA143XS |
| vQ16 | | 48230200 | DTC124XS |
| vQ17 | | 48230200 | DTC124XS |
| •IC | | | |
| vIC1 | | 46288800 | M5220L |
| | or | 49395000 | NJM2068L-D |
| vIC2 | | 46078900 | M5218L |
| •Zener Diode | | | |
| vDZ1 | | 48631200 | RD5.6B2 ES |
| vDZ2 | | 48552400 | MTZ5.6B |
| | or | 48631200 | RD5.6B2 ES |
| vR34 | | 46681300 | 10Ω 1/4W F.R. |
| vC2 | | 48663000 | 220pF 50V C.C. |
| vC8 | | 48662600 | 100pF 50V C.C. |
| vXO1 | | 49372800 | OSC BLOCK BO-3 |
| vL1 | | 42904400 | Peaking Coil |
| vL2 | | 48121500 | Inductor 2.7MH |
| vVR1 | | 48079800 | 100K S.V.R., BIAS |
| vVR2 | | 48079000 | 4.7K S.V.R., REC LEVEL, A Mecha |
| vVR3 | | 48079600 | 47K S.V.R., REC LEVEL, B Mecha |
| •Transistor | | | |
| xQ1 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| xQ2 | | 48230200 | DTC124XS |
| •IC | | | |
| xIC1 | | 49361700 | CX20188 |
| xC5 | | 48090000 | 0.47µF 50V F.C. |
| xC6 | | 48088800 | 0.15µF 50V F.C. |
| xC8 | | 48089200 | 0.22µF 50V F.C. |
| xFL1 | | 46948101 | DOLBY Filter |
| xFL2 | | 46948101 | DOLBY Filter |

## 6-16. F-6088 Power Supply Board

<Stock No. 01149201>

| Parts No. | | Stock No. | Description |
|---|---|---|---|
| •Transistor | | | |
| ⚠ mQ1 | | 48508801 | 2SC3851 |
| ⚠ mQ2 | | 48509101 | 2SA1488 |
| ⚠ mQ3 | | 48508801 | 2SC3851 |
| mQ4 | | 48509101 | 2SA1488 |
| mQ5 | | 46367101 | 2SC2603 |
| | or | 48058801 | 2SC1740S |
| mQ6 | | 46367001 | 2SA1115 |
| | or | 48058601 | 2SA 933S |
| •IC | | | |
| ⚠ mIC1 | | 07183500 | µPC78M05H |
| ⚠ | or | 46144200 | NJM78M05A |
| ⚠ mIC2 | | 46580800 | NJM79M05A |
| ⚠ | or | 49311500 | µPC79M05H |
| •Diode | | | |
| ⚠ mD1 | | 46273600 | DBB10B |
| ⚠ mD2 | | 46273600 | DBB10B |
| ⚠ mD3 | | 46273600 | DBB10B |
| •Zener Diode | | | |
| ⚠ mDZ1 | | 48554600 | MTZ11B |
| ⚠ | or | 48634000 | RD11B2 |
| ⚠ mDZ2 | | 48554600 | MTZ11B |
| ⚠ | or | 48634000 | RD11B2 ES |
| ⚠ mDZ3 | | 48555200 | MTZ13B |
| ⚠ | or | 48634800 | RD13B2 ES |
| mDZ4 | | 48558100 | MTZ30C |
| | or | 48638400 | RD30B3 ES |
| ⚠ mDZ5 | | 48552400 | MTZ5.6B |
| ⚠ | or | 48631200 | RD5.6B2 ES |
| mR6 | | 46626000 | 2.7 kΩ 2W N.I.R. |
| ⚠ mR8,9 | | 46401400 | 3.3 Ω 1/2W N.I.R. |
| ⚠ mR10 | | 46404900 | 2.7 kΩ 1/2W N.I.R. |
| mC5 | | 49369600 | 2200µF 25V E.C. |
| mC6 | | 49369600 | 2200µF 25V E.C. |
| mC11 | | 49369400 | 1000µF 35V E.C. |
| mC13 | | 48748400 | 0.1µF 50V C.C. |
| mC14 | | 48748400 | 0.1µF 50V C.C. |
| mC17 | | 49369400 | 1000µF 35V E.C. |
| mC18 | | 49369300 | 220µF 50V E.C. |
| mC19 | | 49369200 | 1000µF 63V E.C. |

## 6-17. F-6089 Power Supply (Primary Side) Board

| Parts No. | Stock No. | Description |
|---|---|---|
| pC1 | 46943200 | 0.01µF 400V C.C. |

## 6-18. F-6090 TO MASTER Terminal Board

| Parts No. | Stock No. | Description |
|---|---|---|
| oJ20 | 49361100 | DIN Jack, TO MASTER |

## 6-19. F-6091 MIC 8 Jack Board

| Parts No. | Stock No. | Description |
|---|---|---|
| oJ8 | 49360900 | Jack, MIC 8 |

## 6-20. F-6092 Mecha Control Circuit Board

<Stock No. 01172401>

| Parts No. | Stock No. | Description |
|---|---|---|
| •Transistor | | |
| wQ1 | 46367001 | 2SA1115 |
| or | 48058601 | 2SA 933S |
| wQ2 | 48230200 | DTC124XS |
| wQ11 | 46359701 | 2SA952 |
| wQ12 | 48171600 | DTC114YS |
| wQ14 | 46614101 | 2SC3243 |
| wQ15 | 48230200 | DTC124XS |
| wQ16 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| wQ17 | 46359701 | 2SA952 |
| wQ18 | 48171600 | DTC114YS |
| wQ19 | 46359801 | 2SC2001 |
| wQ20 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| wQ21 | 46367101 | 2SC2603 |
| or | 48058801 | 2SC1740S |
| wQ22 | 48230200 | DTC124XS |
| wQ23 | 48230000 | DTA143XS |
| wQ24 | 48230200 | DTC124XS |
| •IC | | |
| wIC1 | 49371400 | M50754-111SP |
| wIC3 | 46149600 | BA6208 |
| wXO1 | 49334900 | Quartz Element |
| •Diode | | |
| wD13 | 46464100 | 1SS133 |
| wD14 | 46464100 | 1SS133 |
| wD15 | 46464100 | 1SS133 |
| wD18 | 48123600 | 11E2 |
| wD19 | 48123600 | 11E2 |
| wD20 | 46464100 | 1SS133 |
| wD21 | 46464100 | 1SS133 |
| wD22 | 46464100 | 1SS133 |
| wD23 | 46464100 | 1SS133 |
| wD24 | 46464100 | 1SS133 |
| wD25 | 46464100 | 1SS133 |
| wD26 | 46464100 | 1SS133 |
| wD27 | 46464100 | 1SS133 |
| wD28 | 46464100 | 1SS133 |
| wD29 | 46464100 | 1SS133 |
| wD30 | 46464100 | 1SS133 |
| wD31 | 46464100 | 1SS133 |
| wD32 | 46464100 | 1SS133 |
| wD33 | 46464100 | 1SS133 |
| •Zener Diode | | |
| wDZ3 | 48552100 | MTZ5.1B |
| or | 48630800 | RD5.1B2 |
| wDZ4 | 48552900 | MTZ6.8A |
| or | 48631900 | RD6.8B1 |
| wR34 | 48765800 | 4.7kΩX4 A.R. |
| wR35 | 48773600 | 10 kΩX8 A.R. |
| wR36 | 48767400 | 100 kΩX4 A.R. |
| wC8 | 48748400 | 0.1μF 50V C.C. |

# 7. OTHER PARTS

Parts List <Top View>

| Parts No. | Stock No. | Description |
|---|---|---|
| 1 | 27673410 | Top Cover |
| 2 | 27771400 | Door Ass'y |
| 3 | 27747500 | Joint Shaft |
| 4 | 27678110 | Door Spring, right side |
| 5 | 49361800 | Damper, door ass'y |
| 6 | 48865110 | Door Latch |
| 7 | 27670700 | Knob, REC (b deck) |
| 8 | 27670600 | Knob, PAUSE (b deck) |
| 9 | 27670800 | Knob, MIX DOWN (b deck) |
| 10 | 27670500 | PLAY Knob (a, b deck) |
| 11 | 27670400 | Knob, STOP (a, b deck) |
| 12 | 27670300 | Knob, F. FWD (a, b deck) |
| 13 | 27670200 | Knob, REW (a, b deck) |
| 14 | 27669800 | Knob, REC (a deck) |
| 15 | 27669900 | Knob, PAUSE (a deck) |
| 16 | 27670000 | Knob, gray (17 x 6) |
| 17 | 27669600 | Knob, gray (4 x 4) |
| 18 | 27672100 | Slide SW. Knob, black |
| 19 | 27669700 | Slide SW. Knob, gray |
| 20 | 27770700 | KB Knob Ass'y, blue |
| 21 | 27671100 | KB Knob Ass'y, green |
| 22 | 27671000 | KB Knob Ass'y, red |
| 23 | 27670900 | KB Knob Ass'y, gray |
| 24 | 27669500 | Dress Panel, deck A PAUSE/REC |
| A | 49368800 | Push SW., REC SELECTOR |
| B | 49370000 | 10KΩ (A) VR., CUE 1~6 |
| C | 49368000 | Push SW.,DOLBY B/C |
| D | 49367900 | Push SW., DECK B |
| E | 49368700 | Push SW., PROCESSOR 1, 2 |
| F | 49368600 | Push SW., AUX 1, 2, 3 |
| G | 49368500 | Push SW., AUTO FUNCTION |
| H | 49370200 | 5KΩ (B) V. R., PITCH (deck a) |
| I | 48113200 | Push SW., deck control |
| J | 49369000 | Input Selector, 1~8 |
| K | 49368900 | MONITOR Switch |
| L | 49368300 | Push SW., METER FUNCTION/ SYNC |
| M | 49419900 | Push SW., FUNCTION |
| N | 49368100 | Push SW., TAPE COUNTER |
| O | 49370000 | 10KΩ (A) V.R., SEND Master |
| P | 49367800 | Push SW., SOLO 7, 8 |
| Q | 49395200 | 10KΩ Bx2, PHONE Level |
| R | 49370000 | 10KΩ (A) V.R., EFFECT Level |
| S | 49369900 | 10KΩ (B) V.R., PAN/TIM |
| T | 49368200 | OUTPUT SELECTOR |
| U | 49370100 | 10KΩ (A) VR., RETURN |
| V | 49369700 | 10KΩ (C) VR., TRIM |
| W | 49369800 | 50KΩ (B) VR., HIGH/LOW |
| X | 49370000 | 10KΩ (A) VR.,D. REV SEND/ EFFECT SEND |
| Y | 49370400 | Slide VR., 10KΩ B, LEVEL |
| Z | 49370500 | Slide VR., 10KΩ Bx2, MASTER LEVEL VR |

Parts List <Front , Rear & Bottom Cover (Inside View)>

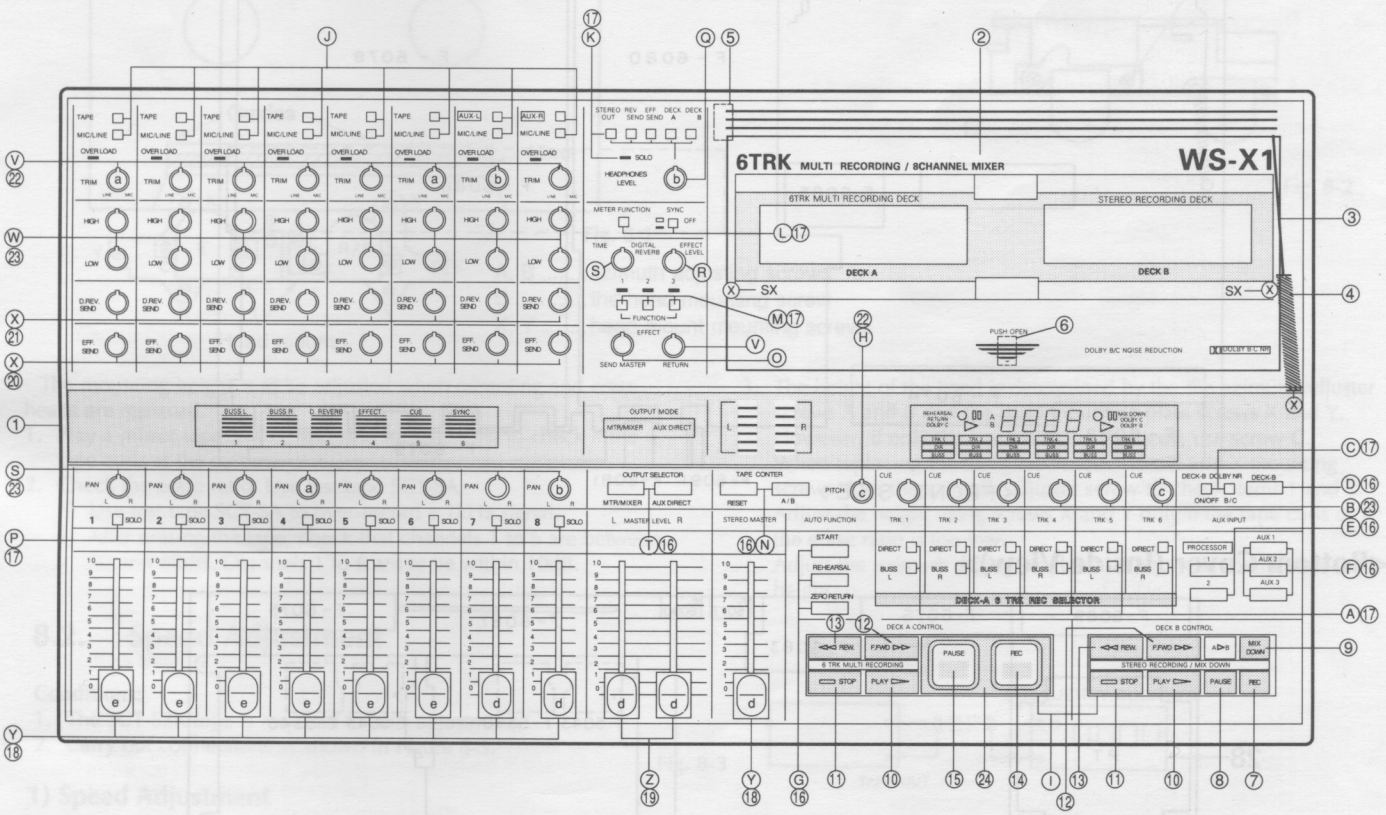
| Parts No. | Stock No. | Description |
|---|---|---|
| ⚠ 28 | 15034202 | Power Transformer <XX, UL, CSA> |
| ⚠ | 15034205 | Power Transformer <EU> |
| 29 | 49360900 | Jack, MIC 7, 8 |
| 30 | 49360800 | Jack, MIC 1~6 |
| 31 | 49360800 | Jack, PUNCH IN/OUT |
| 32 | 46265700 | Jack, HEADPHONE 1, 2 |
| 33 | 48528200 | 4P PROCESSOR Terminal |
| 34 | 48528300 | 6P AUX Terminal |
| 35 | 49361100 | Jack, TO MASTER |
| 36 | 49361200 | 2P Pin Terminal, STEREO OUT |
| 37 | 49362000 | Cannon Connector, MIC 7, 8 |
| 38 | 49361000 | Jack, TAPE CUE/EFFECT |
| ⚠ 39 | 38004700 | Power Supply Cord <XX, UL, CSA> |
| ⚠ | 38004500 | Power Supply Cord <EU> |
| ⚠ 40 | 49374900 | Power Switch |
| ⚠ | or 49375000 | Power Switch |
| 41 | 46533500 | Dolby Switch |
| 42 | 49370300 | 10KΩ (A) V.R., SYNC Level |
| 43 | 49361200 | 2P Terminal, SYNC OUT/ MIXER OUT |
| 44 | 49393500 | 3P Terminal, TAPE OUT 6, 5, 4 |
| 45 | 49361300 | 3P Terminal, TAPE OUT 1, 2, 3 |
| 46 | 39106000 | Strain Relief <XX, UL, CSA> |
| | 48913500 | Strain Relief <EU> |
| ⚠ 47 | 07204700 | Slide SW., voltage selector |

## NOTICE

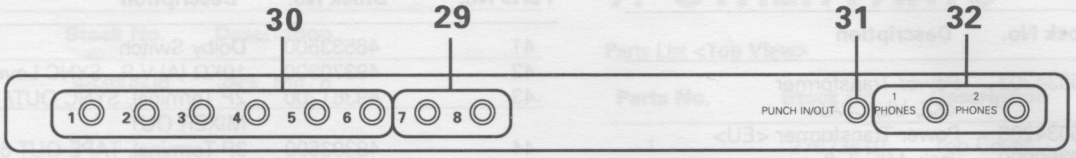
The symbols, UL, CSA, EU, SS and XX <EXPORT> on the parts list and the schematic diagram mean following respectively.

UL ..... Manufactured for U.S.A. market.
(Underwriters Laboratories approved model.)
CSA ..... Manufactured for Canadian market.
EU ..... Manufactured for European market.
XX ..... Standerd Version.
<EXPORT>
NON MARK ..... Common Parts.

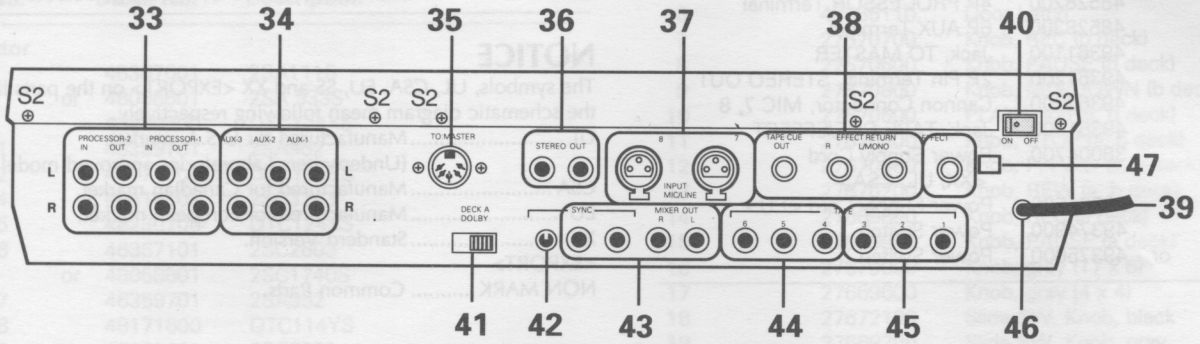
## <Top View>



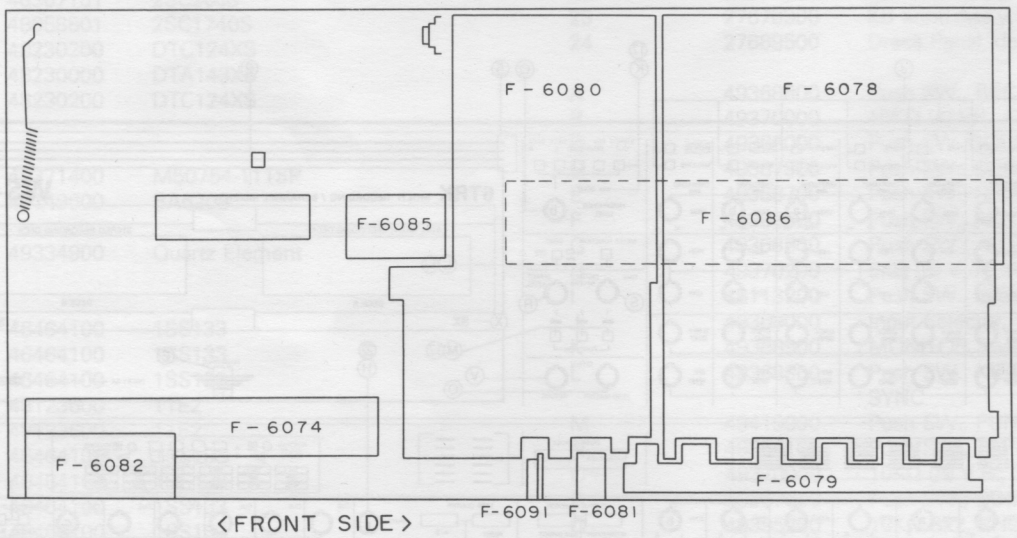
## <Front View>



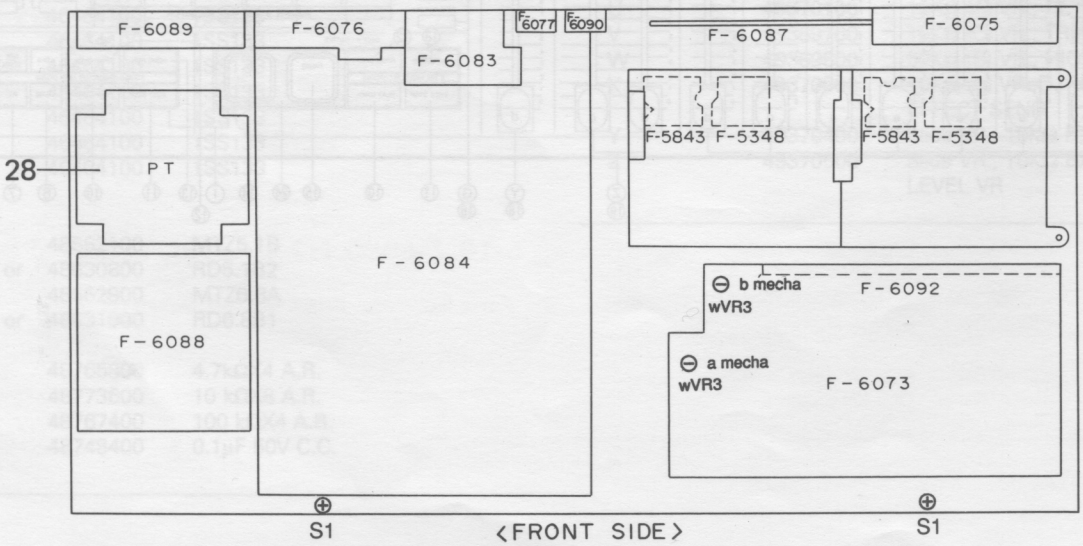

## <Rear View>




## <Top Cover (Inside View)>




## <Bottom Cover (Inside View)>



# 8. ADJUSTMENT

Remove the top cover to carry out these adjustments (see Exchange on page 25).

## Notes on the Tape Decks

**DECK-A is a 6-track one-way record/play deck with a tape speed of 9.5 cm/sec, which is twice that of ordinary cassette recorders. Therefore, take care in the following.**

* DECK-A has been designed exclusively for use with C-60 High-position tapes.
  Do not use normal tapes or "Metal" tapes.
  Do not use C-90 or C-120 cassettes, for they use thin tapes that are stretched easily.
* Due to the one-way recording and doubled tape speed, a C-60 cassette can be used for only 15 minutes of recording or playback.
* DECK-A is a one-way record/play deck.recording only on one side of a cassette. Do not attempt to record on the other side of a tape by placing it upside down, for this erases the previous recording backward.
* DECK-B allows the use of C-90 or lower-time cassettes (i.e. C-30 and C-90) using normal or High-position tapes.
* When inserting a cassette in a deck, place it securely by pushing the shell downward so that the front part of the shell is held by the claws on the left and right.

♦ **List of Sansui Test Tape**

| Name of Test Tape | Recorded Frequency | Description | Equivalent To |
|---|---|---|---|
| SCT-F40 | 40 Hz | Playback Frequency Response Check | – |
| SCT-F1K | 1 kHz | High Frequency Equialization Check | – |
| SCT-F10K | 10 kHz | REC/PB Head Adjustment | – |
| SCB-F10K | 5 kHz | | |
| SCT-L400N | 400 Hz | Playback Level and Indicator Level Adjustment | – |
| SCB-L400N | 200 Hz | | |
| SCT-S3K | 3 kHz | Speed Check and Wow & Flutter Check | – |
| *SCT-AD (NORMAL) | – | Recording Bias Adjustment | TDK AD |
| *SCT-SA (HIGH) | – | REC/PB Level Adjustment | TDK SA |
| *SCT-MA (METAL) | – | Frequency Response Check | TDK MA |

• **Note:** Some reference tapes marked * are not supplied.
As these sre equivalent to ones indicated above, please obtain these blank tapes on your side as possible.

## 8.1 Height Adjustment of Mechanism A

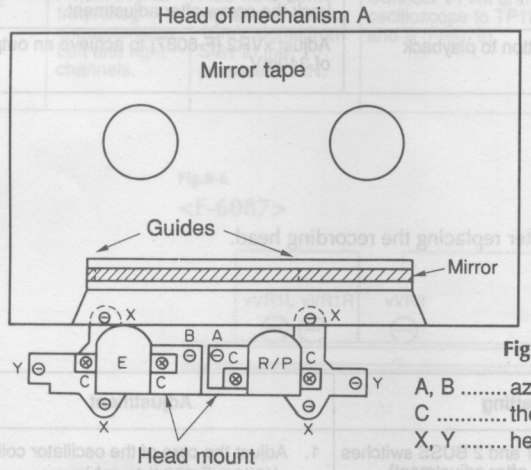



Fig. 8-1

A, B .....azimuth adjusting screws
C .....the head mounting screw
X, Y .....head mount mounting screws

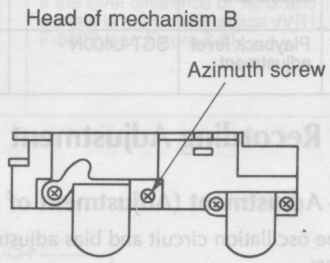



Fig. 8-2

The mounting height is to be adjusted when recording and erase heads are replaced.

1. Play a mirror tape(SONY MC-109, for example) to check if the tape curls at the guides.
2. Check the erase ratio. Use test tape SCT-SA.
   1) Use test tape SCT-SA to over-record a 1kHz signal.
   2) After erasing the tape, check that channels 1 to 6 are between 50 and 60dB. Channels 1 to 6 are to be within 10dB.
3. The height of the head is determined by the the azimuth adjuster screws A and B and the head mounting plate screws X and Y. However, if only the head is being replaced, use screw C. When replacing the head, don't touch the X and Y mounting screws. Use the azimuth adjuster screw to check items 1 and 2. Adjust the height using screws X and Y only if the tape curls or if the erase ratio is too low.
   Adjust the azimuth during playback adjustment, then check the height.

## 8.2. Speed Adjustment

**Conditions:**

1. The SCT-S3K tape is required for this adjustment.
2. Carry out connections as shown in Figure 8-3.

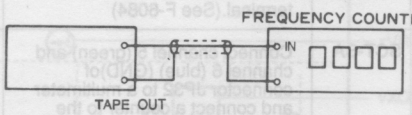



Fig. 8-3

### 1) Speed Adjustment

Set the PITCH control VR (on the panel) to mid position

| Step | Item | Input Signal | Output | Setting | Adjustment |
|---|---|---|---|---|---|
| 1 | Speed adjustment, mechanism A | Test tape SCT-S3K | Connect a frequency counter to TAPE OUT 1 | Press the PLAY button of mechanism A to playback the SCT-S3K tape. | If not 6kHz±10Hz, adjust using wVR2 on the F-6073 board. |
| 2 | Speed adjustment, mechanism B | Test tape SCT-S3K | Connect a frequency counter to TP1 L and R (F-6087) | Press the PLAY button of mechanism B to playback the SCT-S3K tape. | If not 3kHz±15Hz, adjust using wVR3 on the F-6073 board. |

## 8.3. Playback Adjustment

**Conditions:**

1. Clean the recording and playback heads before starting adjustments.
2. SCT-F10K and SCT-L400N test tapes are required for this adjustment.
3. Set the Dolby switch OFF.
4. Carry out the connections as shown in Figure 8-4.

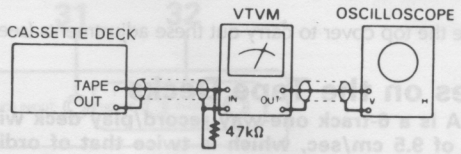



Fig. 8-4

### 1) Adjustment of Mechanism A

| Step | Item | Input Signal | Output | Setting | Adjustment |
|---|---|---|---|---|---|
| 1 | REC/PB head adjustment | SCB-F10KN | Connect VTVM and oscilloscope to TAPE OUT 1 | Press the PLAY button to playback SCB-F10K. | Adjust the azimuth adjuster screw as shown in Figure 8-1 to achieve the optimum output. Lock the screw after adjustment. |
| 2 | Playback level adjustment 1~6 CH | SCB-L400N | Connect VTVM and oscilloscope to TAPE OUT 1~6 CH | Press the PLAY button to playback SCB-L400N. | Adjust xVR101-601 (F-6084) to achieve an output of 285mV. |

### 2) Adjustment of Mechanism B

| Step | Item | Input Signal | Output | Setting | Adjustment |
|---|---|---|---|---|---|
| 1 | REC/PB head adjustment | SCT-F10KN | Connect VTVM and oscilloscope to TP1 L and R (F-6087). | Press the PLAY button to playback SCT-F10K. | Adjust the azimuth adjuster screw as shown in Figure 8-2 to achieve the optimum output. Lock the screw after adjustment. |
| 2 | Playback level adjustment | SCT-L400N | As above | Press the PLAY button to playback SCT-L400N. | Adjust xVR2 (F-6087) to achieve an output of 340mV. |

## 8-4. Recording Adjustment

### 1) BIAS Adjustment (Adjustment of Mechanism A)

Use the oscillation circuit and bias adjustment VRs to carry out this adjustment after replacing the recording head.

**Conditions:**

1. Test tape SCT-SA is required for this adjustment.
2. Set the Dolby switch OFF.

| Step | Item | Input Signal | Output | Setting | Adjustment |
|---|---|---|---|---|---|
| 1 | BIAS frequency adjustmentt | SCT-SA | Connect a multimeter to channel 1 (brown) and channel 2 (red) (GND) of connector JP30, then connect a frequency counter to the multimeter's monitor terminal.(See F-6084) | 1. Set channel 1 and 2 BUSS switches ON (set OFF after adjustment).<br>2. Mount the SCT-SA tape in the set.<br>3. Select RECORD. | 1. Adjust the core of the oscillator coil vX0701 (F-6084) to achieve a frequency of 85kHz±1kHz. |
| 2 | Matching transformer adjustment. Channels 1 and 2. | SCT-SA | As above | As above | 1. Adjust the core of the matching transformer vX0101 and vX0201 (F-6084) to achieve the maximum voltage on the meter (about 4.5V). |
| 3 | Matching transformer adjustment. Channels 3 and 4. | SCT-SA | Connect channel 3 (brown) and channel 4 (yellow) (GND) of connector JP31 to a multimeter and connect a counter to the multimeter's monitor terminal.(See F-6084) | 1. Set channel 3 and 4 BUSS switches ON (set OFF after adjustment).<br>2. Mount an SCT-SA tape in the set.<br>3. Select RECORD. | 1. Adjust the core of the matching transformer vX0301 and vX0401 (F-6084) to achieve the maximum voltage on the meter (about 4.5V). |
| 4 | Matching transformer adjustment. Channels 5 and 6. | SCT-SA | Connect channel 5 (green) and channel 6 (blue) (GND)of connector JP32 to a multimeter and connect a counter to the multimeter's monitor terminal.monitor terminal. (See F-6084) | 1. Set channel 5 and 6 BUSS switches ON (set OFF after adjustment).<br>2. Mount an SCT-SA tape in the set.<br>3. Select RECORD | 1. Adjust the core of the matching transformer vX0501 and VX0601 (F-6084) to achieve the maximum voltage on the meter (about 4.5V). |

### 2) Adjusting Recording Level and Overall Frequency Characteristics

**Conditions:**

1. Carry out the connections as shown in Figure 8-5.
2. Set the DOLBY switch to position "C".
3. Set all F-6073 push-switches OFF.
4. Set the processor switch 1 ON.

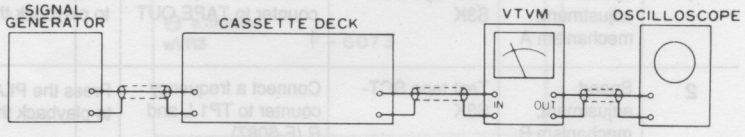



Fig. 8-5

## Adjusting Mechanism A

Record in pairs using channels 1 and 2, channels 3 and 4, and channels 5 and 6. Make sure BUSS switches 1 and 2, 3 and 4 and 5 and 6 are ON as appropriate.

| Step | Item | Input Signal | Output | Setting | Adjustment |
|---|---|---|---|---|---|
| 1 | Recording level adjustment. Tracks 1-6 | Add 1kHz 50mV signal from SG1 to the processor 1 IN. | Connect VTVM and oscilloscope to TAPE OUT 1-6. | Mount SCT-SA on mechanism A<br>1. Record a 1kHz signal<br>2. Play back the recorded signal. | Adjust vVR102-602 F-6084 so that the difference between the level of the output signal during recording and the level of the playback signal is 0±1dB (see Figure 8-7) |
| 2 | Adjust overall frequency characteristics. Tracks 1-6. | Add 1kHz 15mV signal and 10kHz 15mV signal from SG1to the processor 1 IN. | Connect VTVM and oscilloscope to TAPE OUT 1-6. | Mount SCT-SA on mechanism A<br>1. Record a 1kHz signal and 10kHz signal<br>2. Play back the recorded signals. Check that the level differential of each is 0±1dB. | If the level difference of 1kHz and 10kHz signals is not 0±1dB, adjust vVR101-601 F-6084 (see Figure 8-7). |

## Adjusting Mechanism B

| Step | Item | Input Signal | Output | Setting | Adjustment |
|---|---|---|---|---|---|
| 1 | Recording level adjustment. Left and right channels. | Add 1kHz 50mV signal from SG1 to the processor 1 IN. | Connect VTVM and oscilloscope to TP1L and R (F-6078). | Mount SCT-SA on mechanism B<br>1. Record a 1kHz signal<br>2. Play back the recorded signal. | Adjust vVR3L and R F-6087 so that the difference between the level of the output signal during recording and the level of the playback signal is 0±1dB (see Figure 8-6). |
| 2 | Adjust overall frequency characteristics. Left and right channels. | Add 1kHz 15mV signal and 10kHz 15mV signal from SG1 to the processor 1 IN. | Connect VTVM and oscilloscope to TP1L and R (F-6078). | Mount SCT-SA on mechanism B<br>1. Record a 1kHz signal and 10kHz signal.<br>2. Play back the recorded signals. Check that the level differential of each is 0±1dB. | If the level difference of 1kHz and 10kHz signals is not 0±1dB, adjust vVR1L and R F-6087 (see Figure 8-6). |

Fig.8-6

<F-6087>

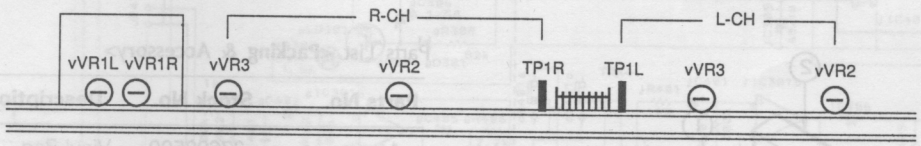
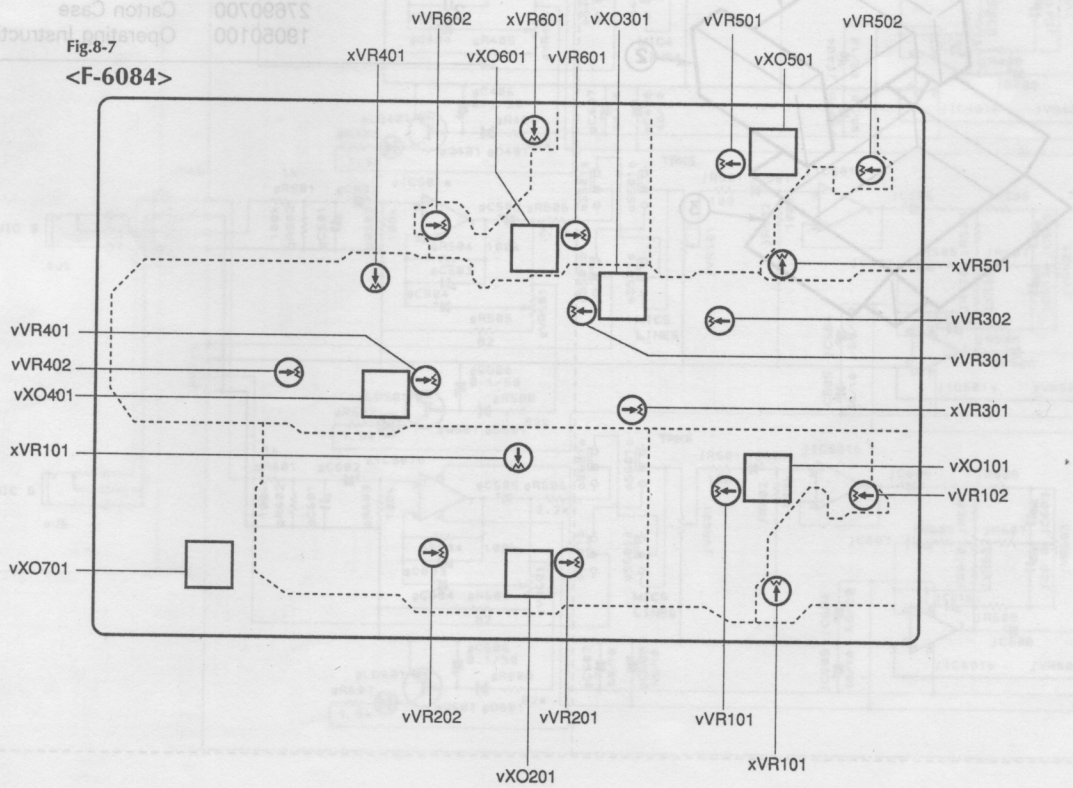



Fig.8-7

<F-6084>

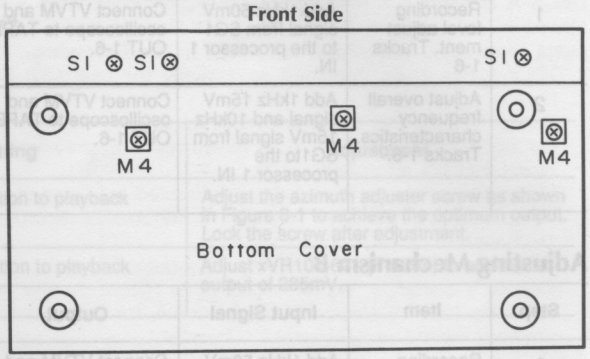


# 9. HOW TO REPLACE MAIN PARTS

## A. Replacement method for top cover assembly

1. Remove the 3 screws S1 on the bottom cover. (See Fig. 9-1)
2. Remove the 2 knobs ⓒ (See page 20)
3. Open the door assembly and remove the 2 screws (sx). (See page 20)
4. Remove the 5 screws S2 on the back of the top cover.
   (See Rear View on page 21)
5. Remove 3 screws (M4) on the bottom cover. (See Fig. 9-1)

<Bottom View> Fig. 9-1



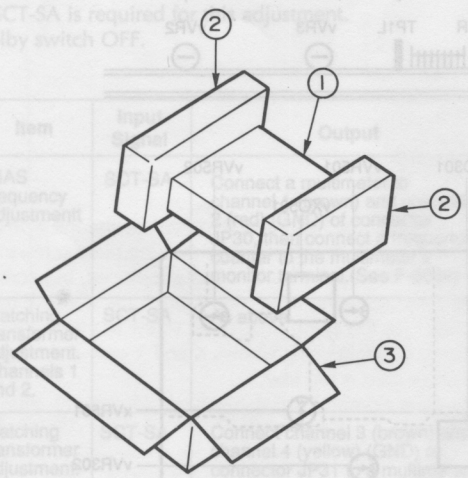

## B. Removal Method for Printed Circuit Board F-6080 (See page 20)

1. Remove the top cover assembly.
2. Remove the 5 slide volume knobs ⓓ.
3. Remove the 3 knobs ⓑ.
4. Remove the 9 circuit board attachment screws.

## C. Removal Method for Printed Circuit Board F-6078 (See page 20)

1. Remove the printer cover assembly.
2. Remove the 6 slide volume knobs ⓔ.
3. Remove the 3 knobs ⓐ.
4. Remove the 9 circuit board attachment screws.

# 10. PACKING & ACCESSORY LIST

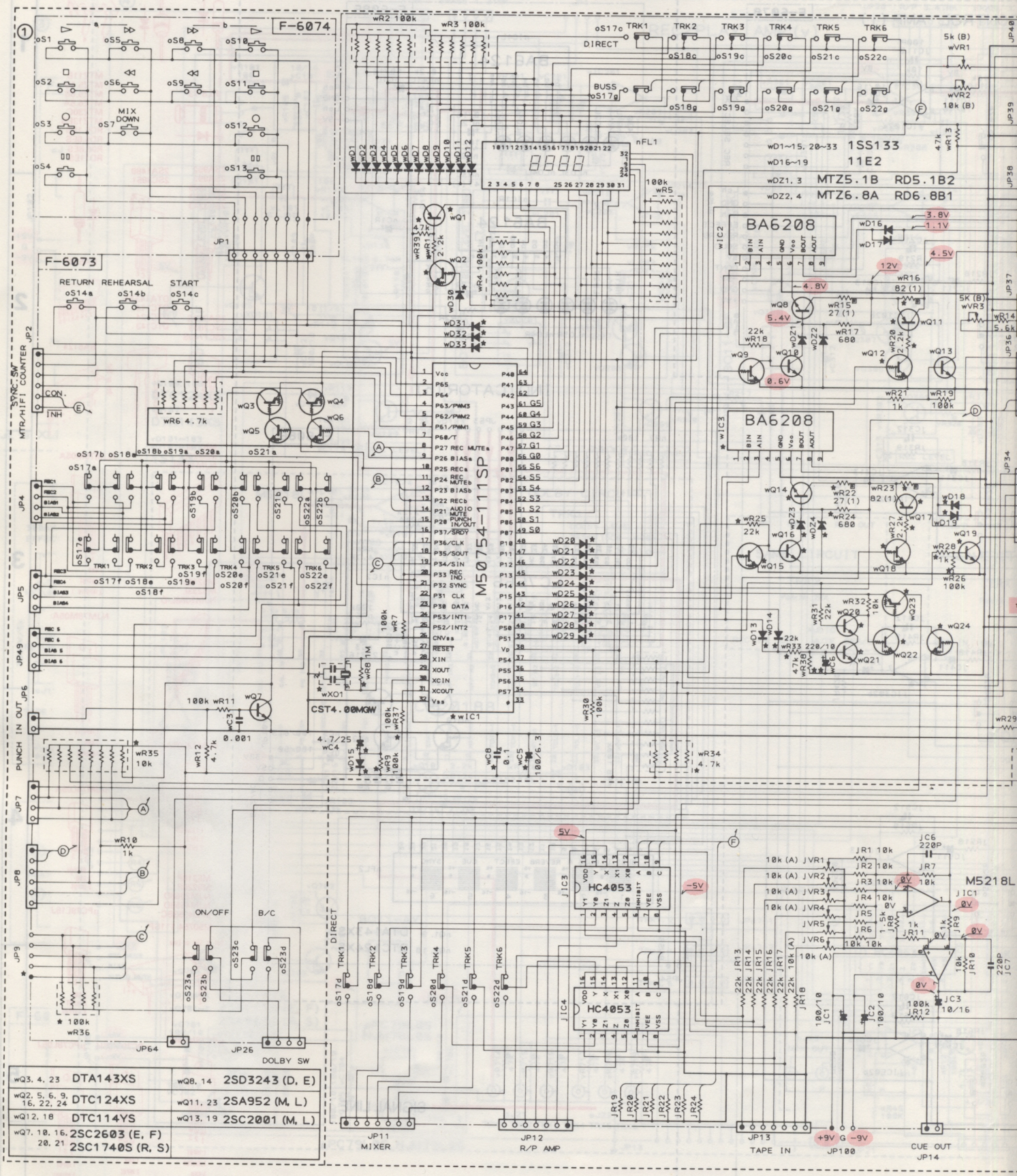



Parts List <Packing & Accessory>

| Parts No. | Stock No. | Description |
|---|---|---|
| 1 | 27690500 | Vinyl Bag |
| 2 | 27767200 | Styrofoam Packing |
| 3 | 27690700 | Carton Case |
| | 19050100 | Operating Instructions |

# 11. SCHEMATIC DIAGRAM

## 11-1. System Control & Mechanism Section

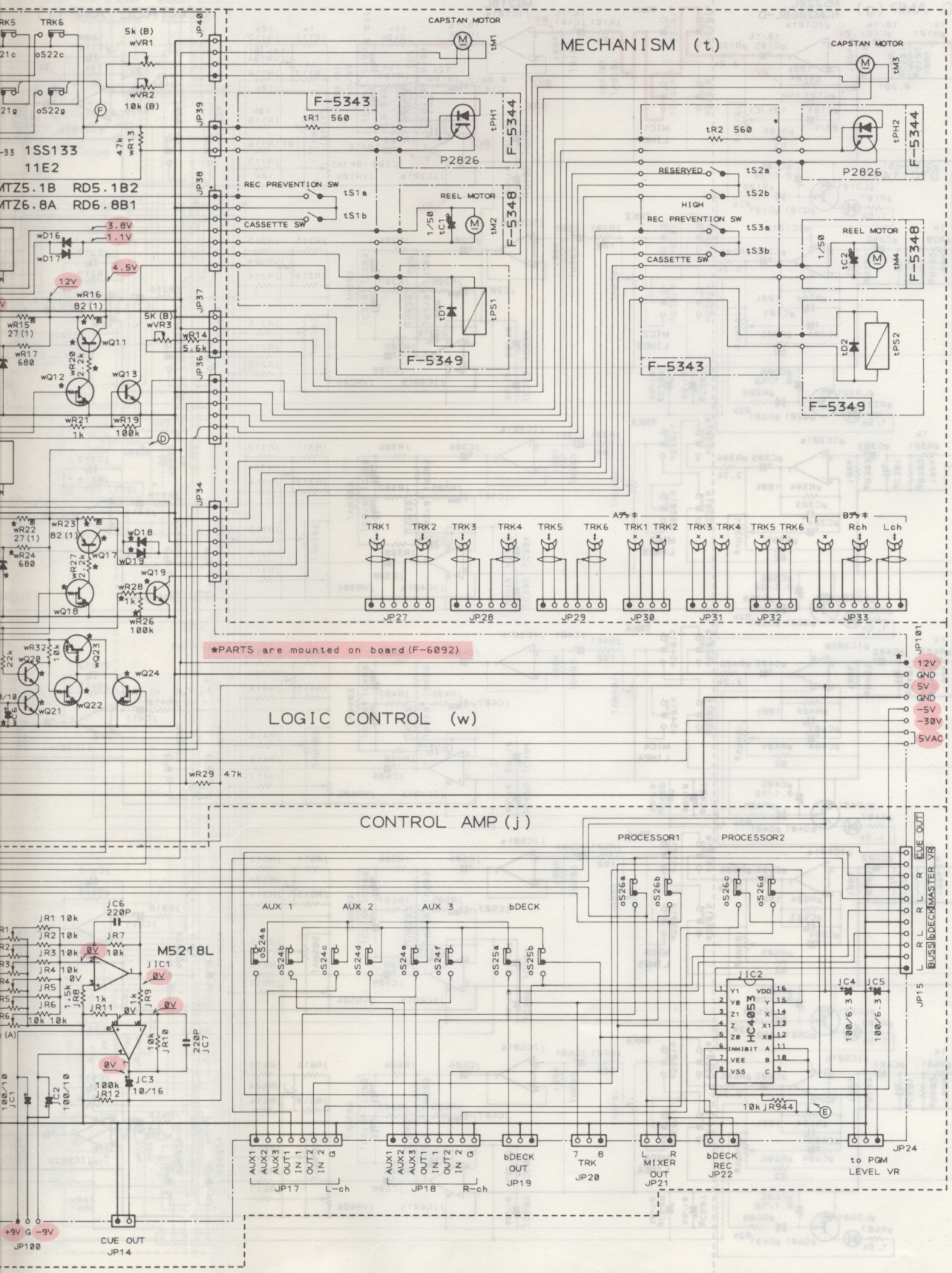



| | | | |
|---|---|---|---|
| wQ3, 4, 23 | DTA143XS | wQ8, 14 | 2SD3243 (D, E) |
| wQ2, 5, 6, 9, 16, 22, 24 | DTC124XS | wQ11, 23 | 2SA952 (M, L) |
| wQ12, 18 | DTC114YS | wQ13, 19 | 2SC2001 (M, L) |
| wQ7, 10, 16, 20, 21 | 2SC2603 (E, F) 2SC1740S (R, S) | | |

D E F G H

## Section

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.




1S2473 11E2 1SS133 DBB10B

RLS-73

MTZ11B MTZ5.1B MTZ5.6B MTZ6.8A MTZ30C MTZ13ES RD5.1ES RD5.6ES R06.8ES RD11ES

2SA952 2SA992 2SC1845 2SC2001 2SC3243 2SA1488 2SC3851

BA6208

2SA933S 2SC2603 2SC1740S DTA143XS DTC114 DTC124 DTC143

BA6124

M5218L M5220L NJM4556L NJM79M05A

M5216L M5233L NJM2068L-D NJM78M05A

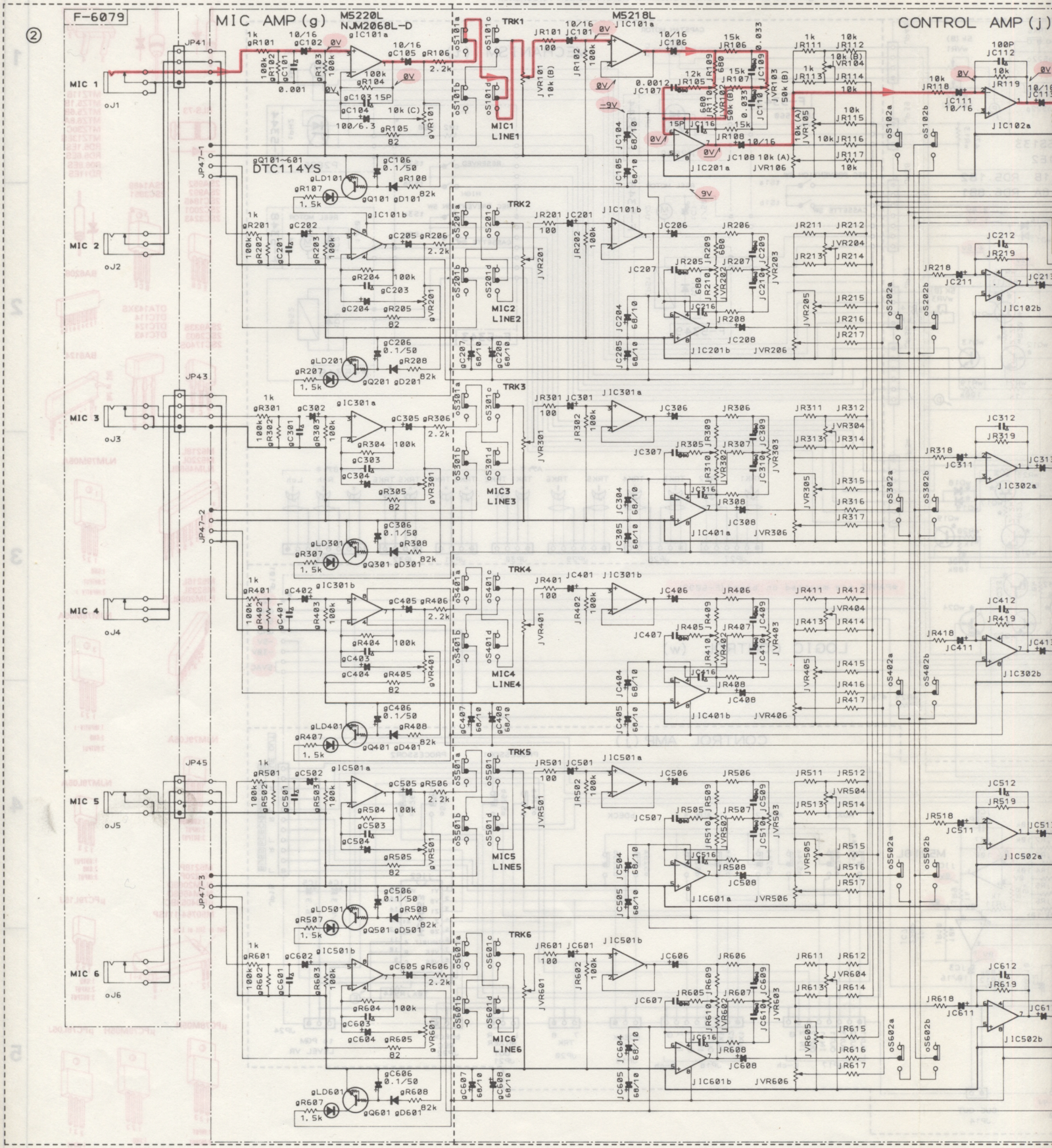
NJM79L05A NJM78L05A

M5218P M5220P NJM2068D NJM4558D μPD4053BC M50754-111SP μPC79L15J

μPC78M05H μPC79M05H μPC78L05J

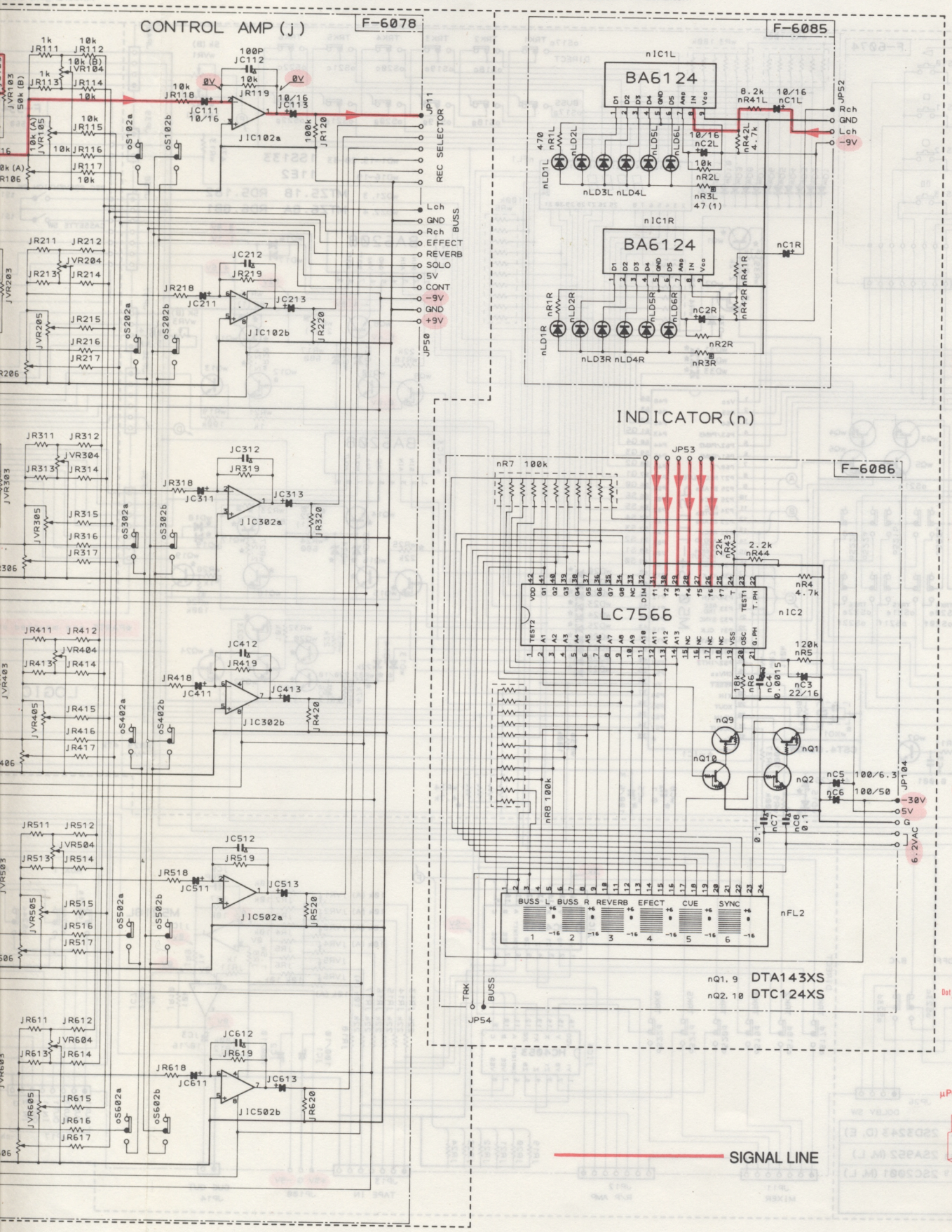
| A | B | C | D | E |
|---|---|---|---|---|

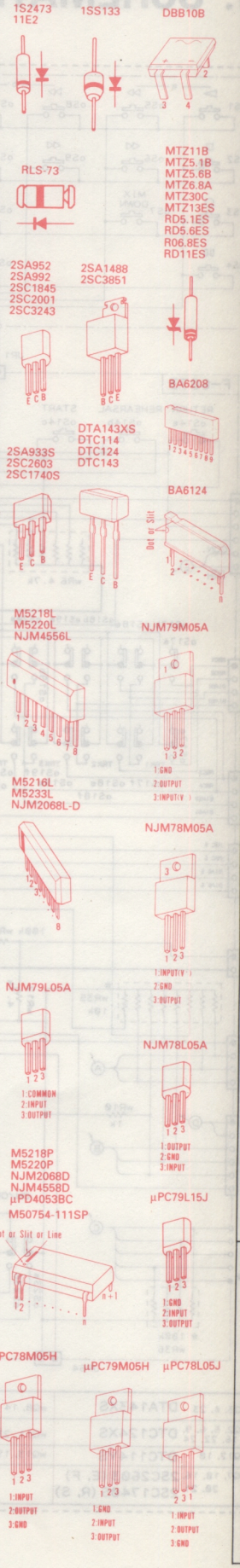
## 11-2. MIC & Control AMP Section



D E F G H

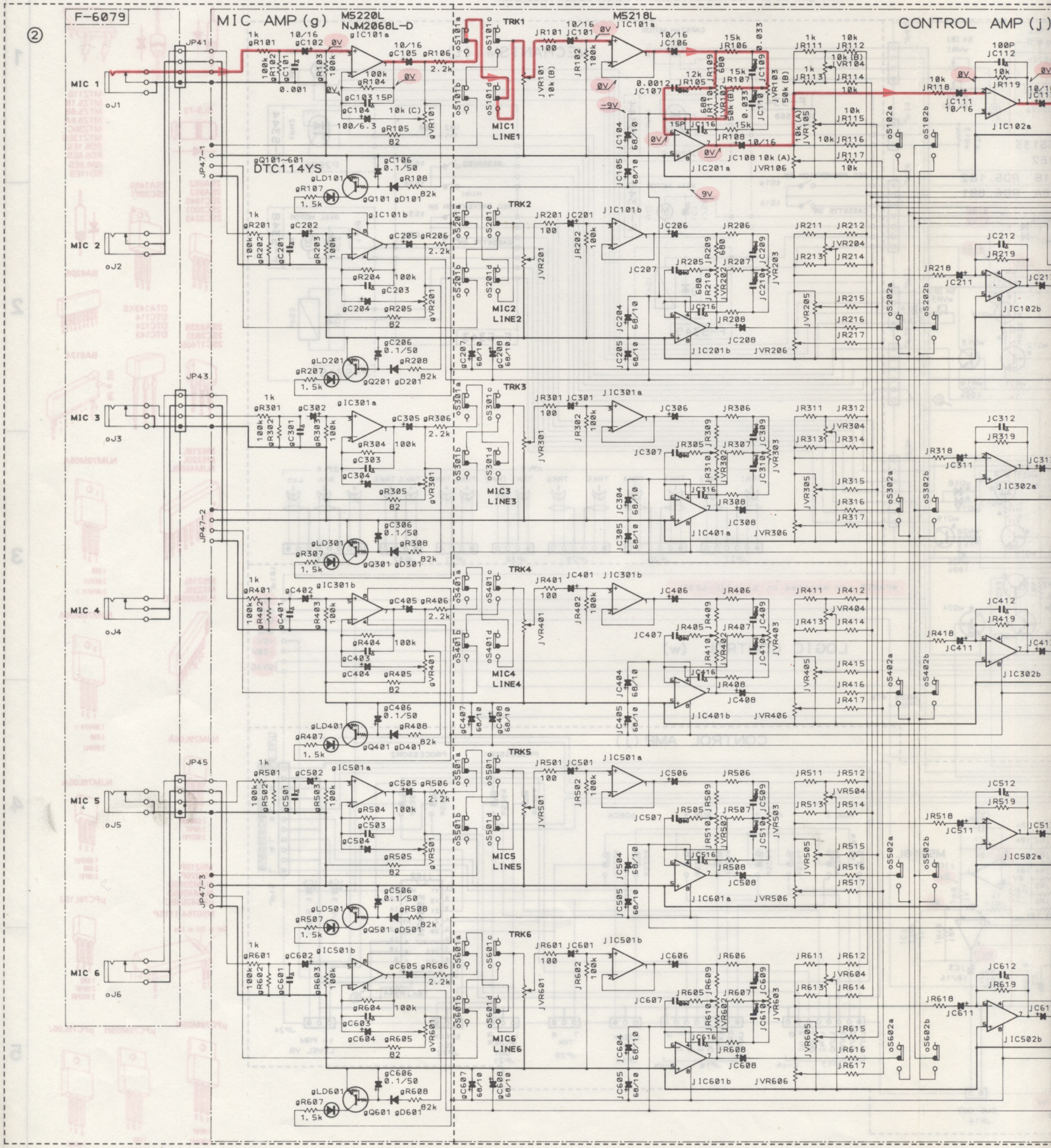
* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



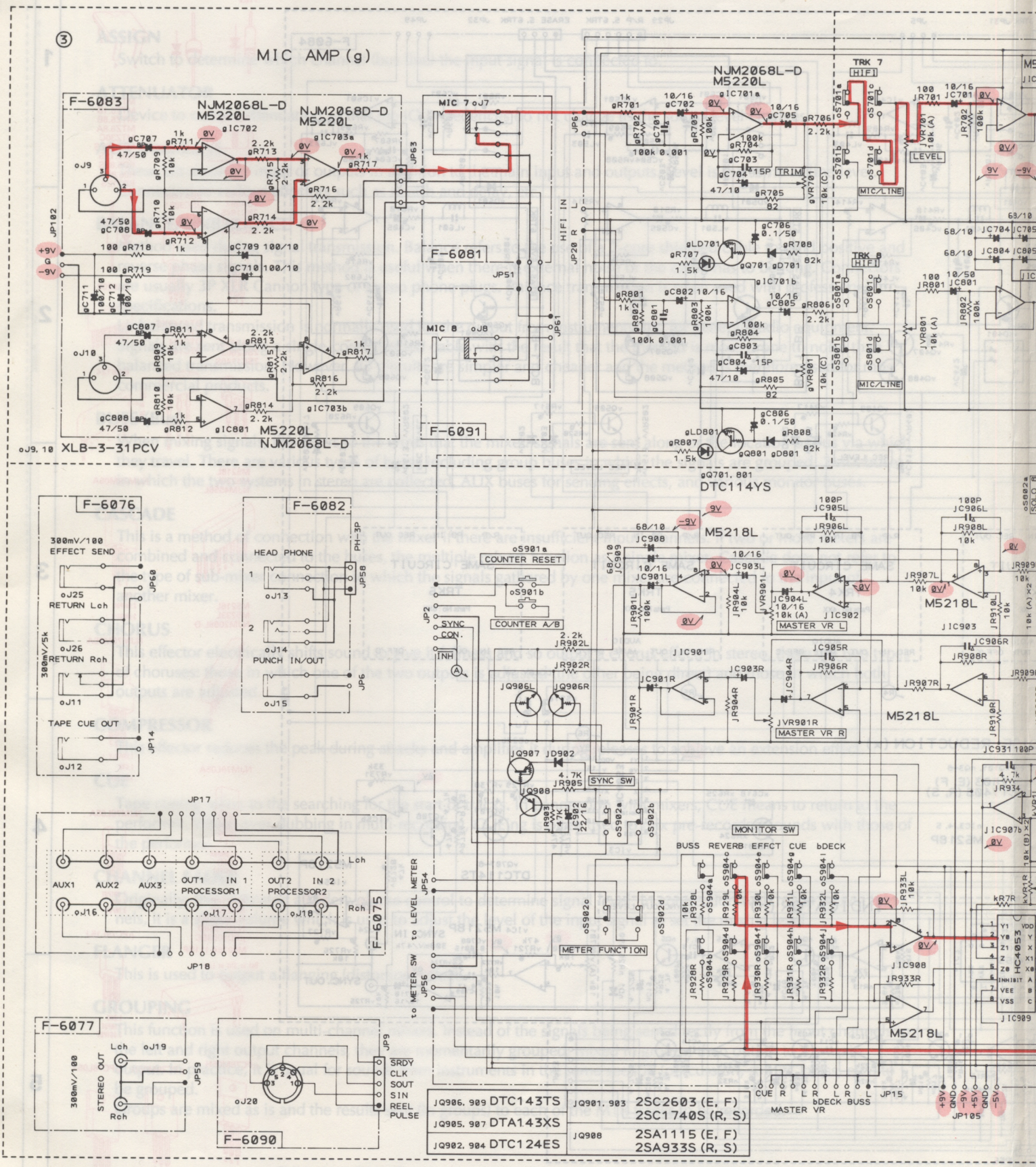



| A | B | C | D | E |
|---|---|---|---|---|

## 11-2. MIC & Control AMP Section



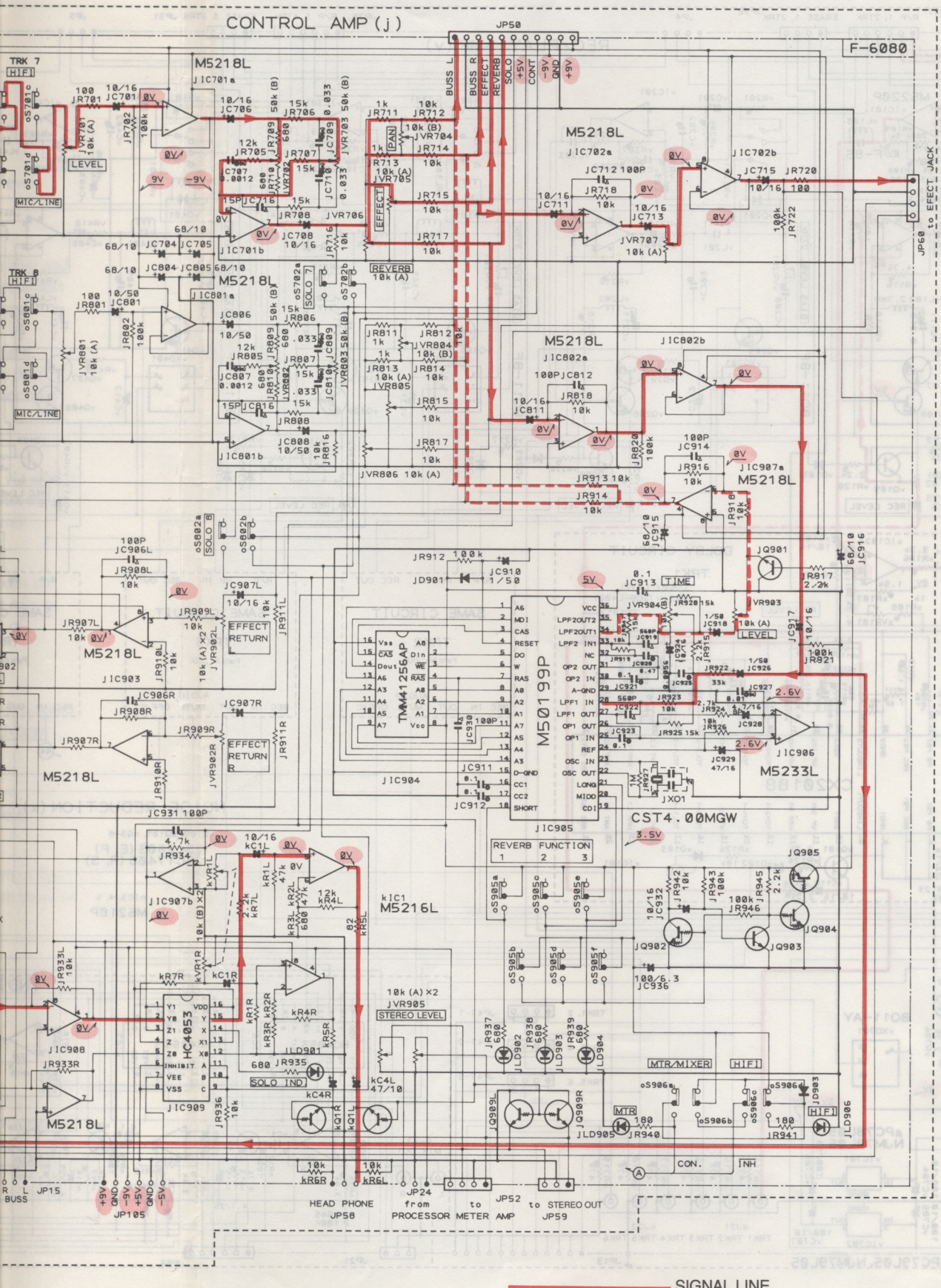
## 11-3. MIC, Control & Reverb AMP Section

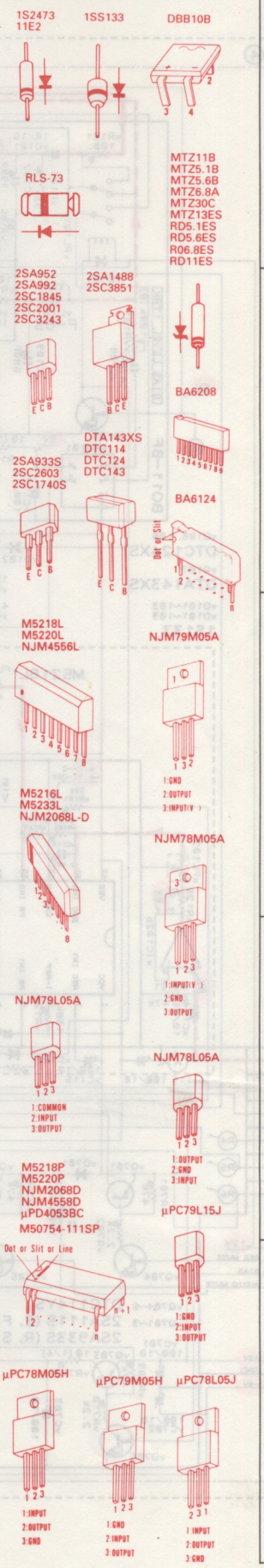



| | | | |
|---|---|---|---|
| JQ906, 909 | DTC143TS | JQ901, 903 | 2SC2603 (E, F)<br>2SC1740S (R, S) |
| JQ905, 907 | DTA143XS | JQ908 | 2SA1115 (E, F)<br>2SA933S (R, S) |
| JQ902, 904 | DTC124ES | | |

D E F G H

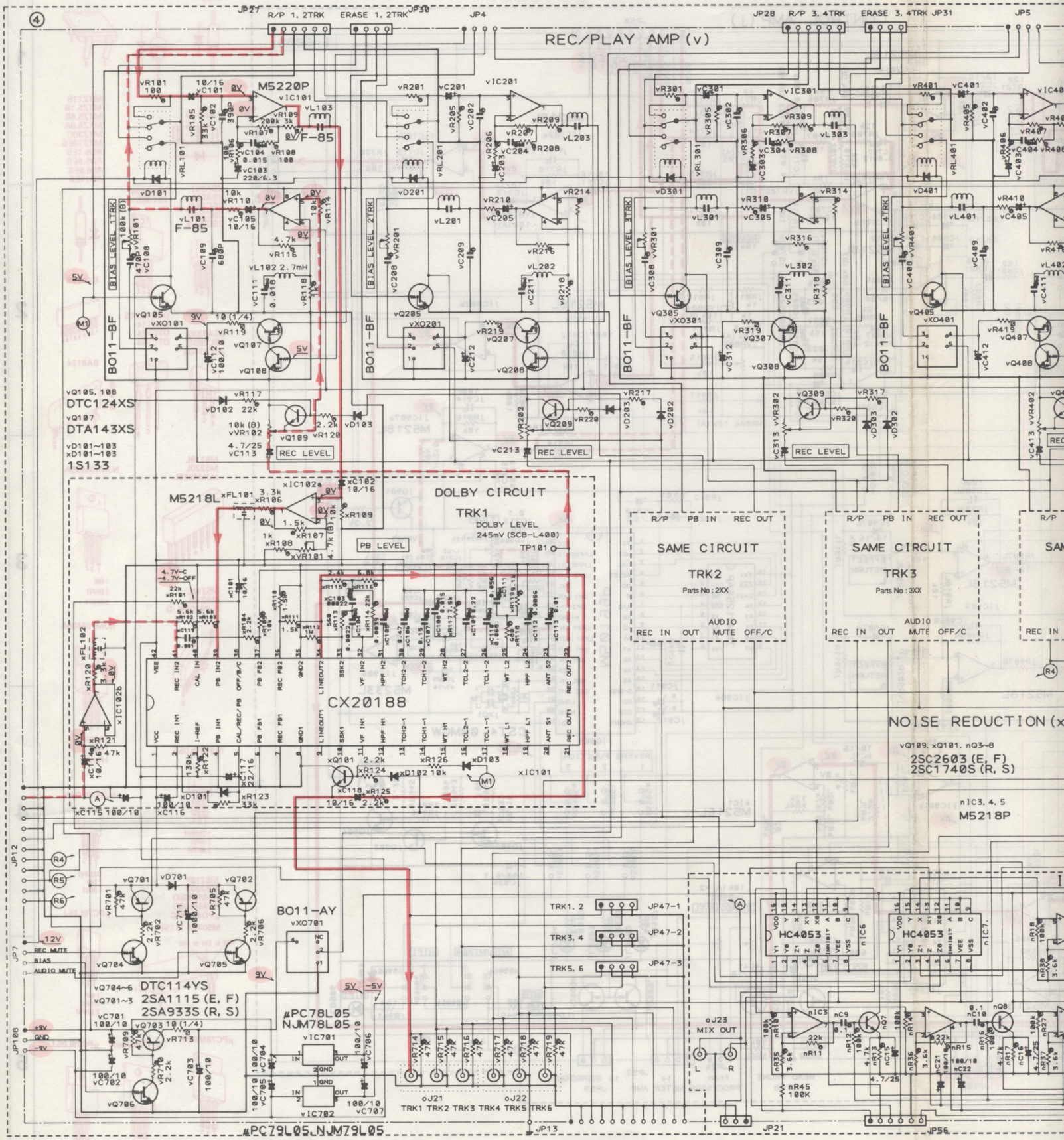
* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



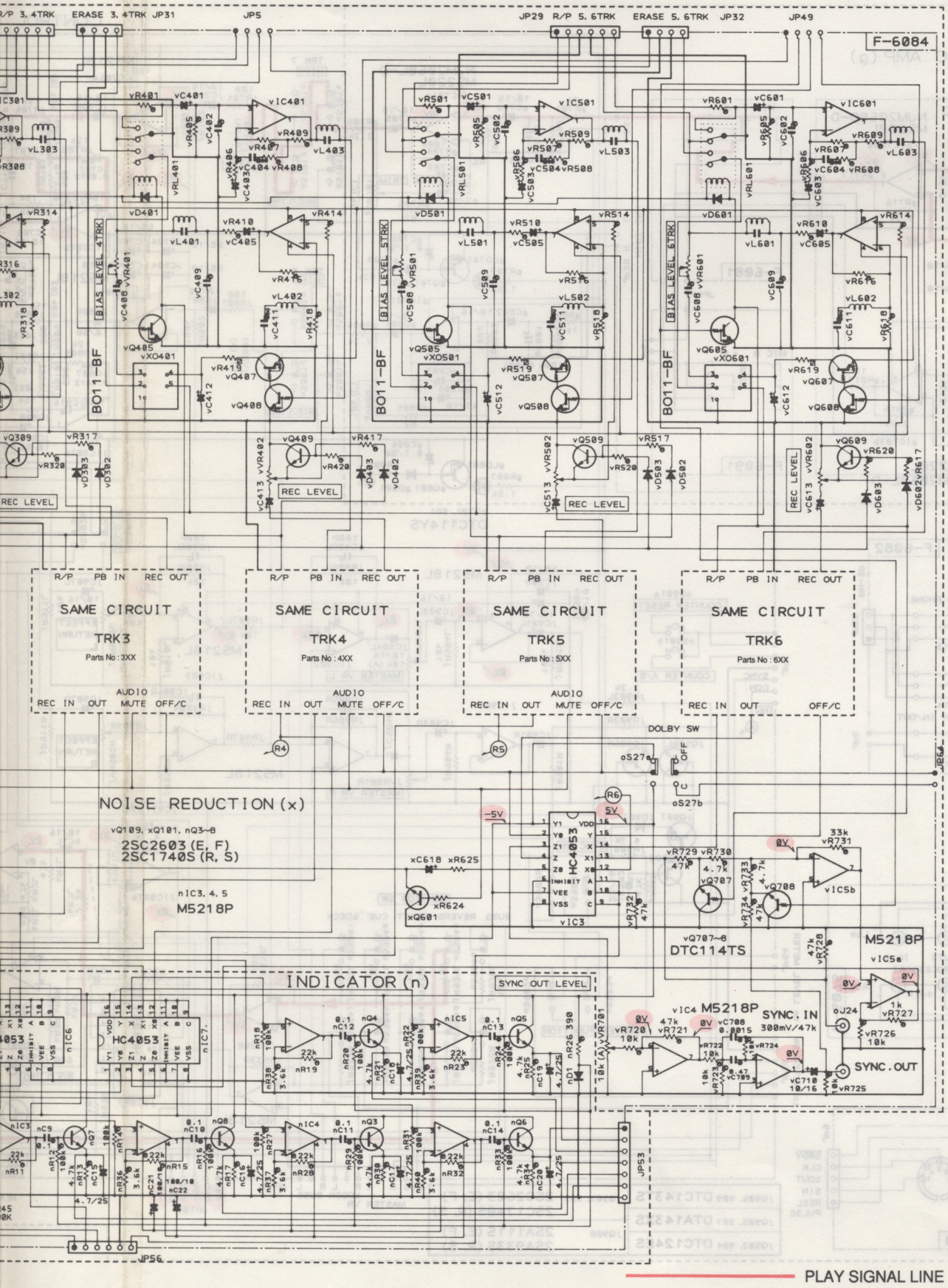
| A | B | C | D | E |
|---|---|---|---|---|

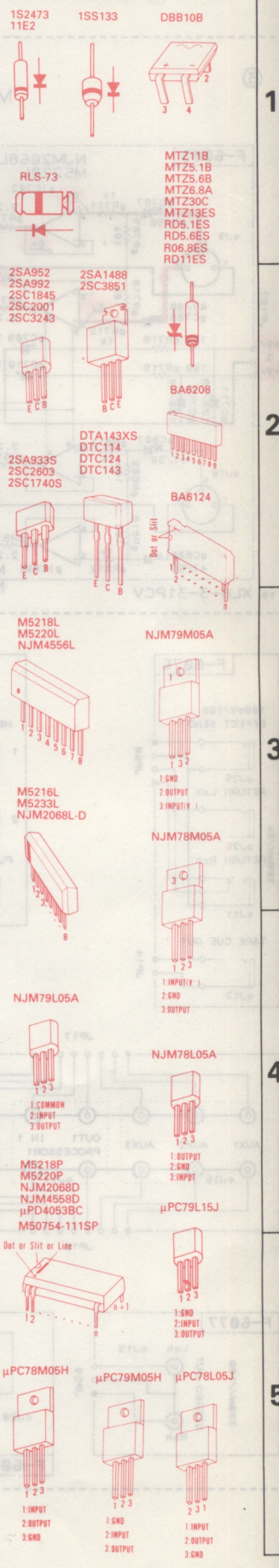
## 11-4. REC/PLAY AMP & DOLBY Noise Reduction Section



D E F G H

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

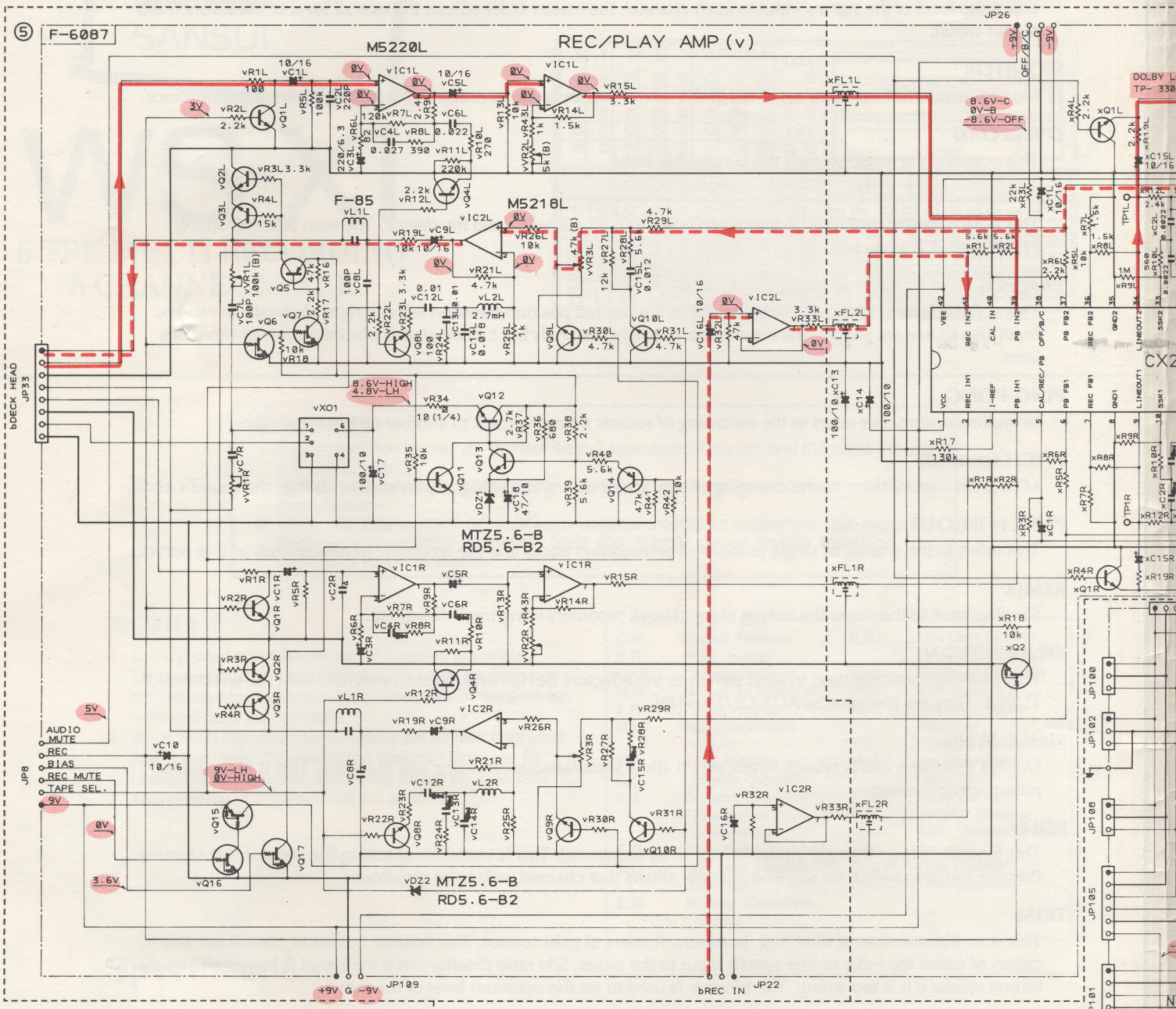


| A | B | C | D |
|---|---|---|---|

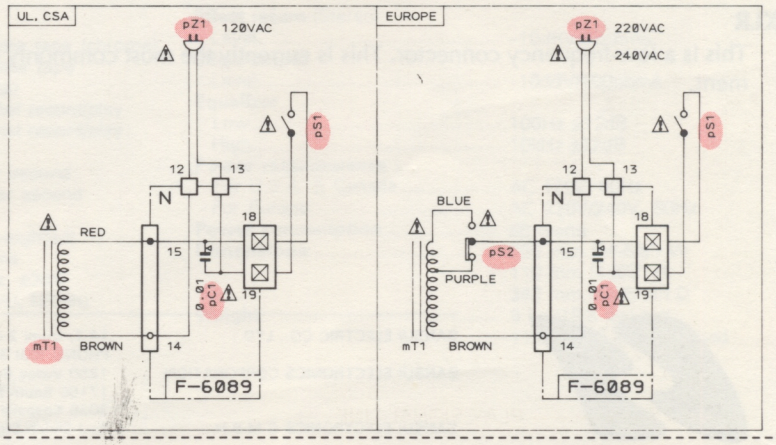
## 11-5. REC/PLAY, DOLBY Noise Reduction & Power Supply Section

* Design and specifications subject to cha
* La présention et les spécifications sont s
* Änderungen, die dem technischen Fortsc




SYMBOL OF FUNCTION

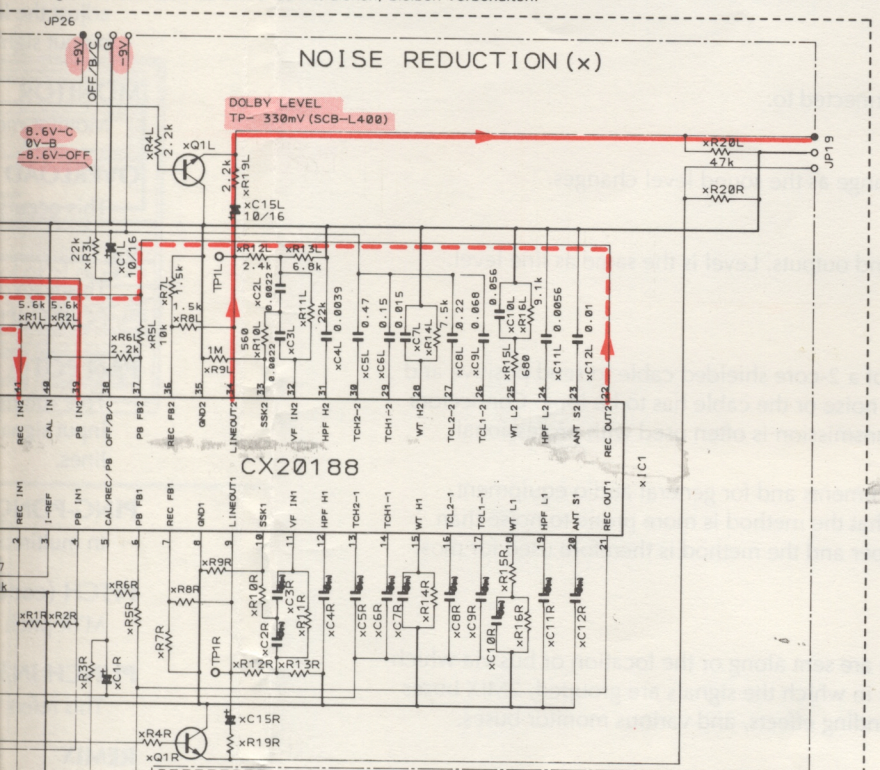
- (g) MIC AMP
- (j) CONTROL AMP
- (k) POWER AMP
- (m) POWER SUPPLY
- (n) INDICATOR
- (o) SELECTOR
- (p) FIXED PARTS
- (t) CASSETTE MECHANISM
- (v) REC/PLAY AMP
- (w) LOGIC CONTROL
- (x) NOISE REDUCTION




⚠ Is Safety Par
Use only repl
by the manufa

D E F G H

Design and specifications subject to change without notice for improvement.
La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.




SYMBOL
- △ Ceramic Capacitor
- Low-Leak Electrolytic
- B.P Bi-Polar Electrolytic
- (m) Mylar
- (p,pp) Polypropylene Film
- Polystyrene
- Barrier Layer Capacitor
- Non-Inflammable Resistor
- Fusing Resistor
- Chip Component (Cylindrical Type)

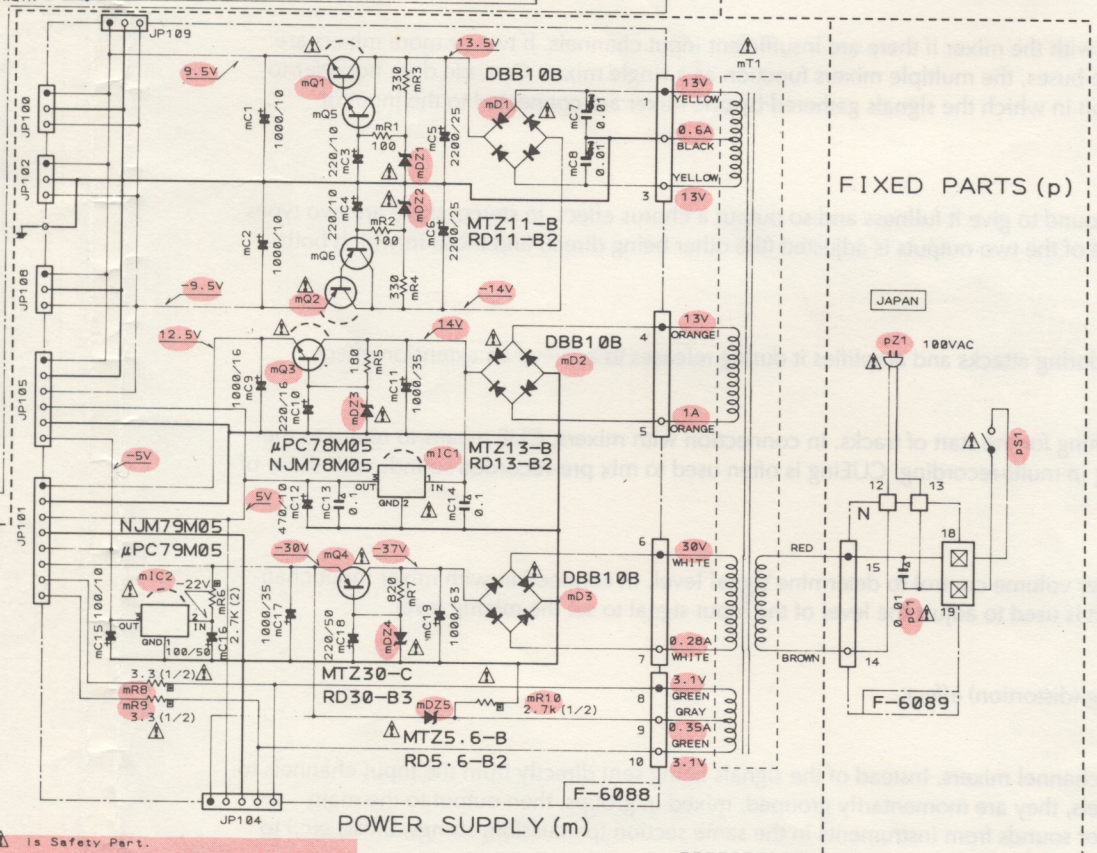
RESISTORS
Are in ohms, 1/6Watts, ±5% Tolerance
Unless Otherwise Noted k:kΩ, M:MΩ
TOLERANCE G:±2% F:±1%

CAPACITORS
Are in μF, Unless Otherwise Noted P:pF

ELECTROLYTIC CAPACITORS
Capacitance(μF)/Volt(V)

Each D.C.Voltage shows the nominal value in volts at during recording.

| | |
|---|---|
| vQ6, 7, 16, 17 xQ2 | DTC124XS |
| vQ15 | DTA143XS |
| vQ1, 12 | 2SC2001 (M, L) |
| vQ2, 3 | 2SC1845 (E, F) |
| vQ5 | 2SA992 (E, F) |
| mQ1, 3 | 2SC3851 (O, Y) |
| mQ2, 4 | 2SA1488 (O, Y) |
| vQ4, 8, 9, 10, 11, 13, xQ1, mQ5 | 2SC2603 (E, F)<br>2SC1740S (R, S) |
| vQ14, mQ6 | 2SA1115 (E, F)<br>2SA933S (R, S) |




⚠ Is Safety Part.
Use only replacement parts recommended by the manufacturer.

PLAY SIGNAL LINE

REC SIGNAL LINE

1S2473 11E2 1SS133 DBB10B

RLS-73

MTZ11B MTZ5.1B MTZ5.6B MTZ6.8A MTZ30C MTZ13ES RD5.1ES RD5.6ES R06.8ES RD11ES

2SA952 2SA992 2SC1845 2SC2001 2SC3243 2SA1488 2SC3851

BA6208

DTA143XS DTC114 DTC124 DTC143 2SA933S 2SC2603 2SC1740S

BA6124

M5218L M5220L NJM4556L NJM79M05A

M5216L M5233L NJM2068L-D NJM78M05A

NJM79L05A NJM78L05A

M5218P M5220P NJM2068D NJM4558D μPD4053BC M50754-111SP μPC79L15J

μPC78M05H μPC79M05H μPC78L05J

# 12. DESCRIPTION OF MTR/MIXER WORDING

**ASSIGN**
Switch to determine which channel (bus line) the input signal is connected to.

**ATTENUATOR**
Device to correct attenuation so that the IO impedences do not change as the sound level changes.

**AUX (Auxiliary)**
These are auxiliary input or outputs in addition to the main input and outputs. Level is the same as line level. Connected to various effectors such as reverb and delay, etc.

**BALANCE/UNBALANCE**
Method used during signal transmission. Balance refers to the use of a 2-core shielded cable to send positive and reverse phase signals. This method is useful when there is external noise or the cable has to be long. Connectors are usually 3P XLR Cannon type or stereo phone plugs. Balance transmission is often used with professional specifications.
Unbalanced transmission is normally used for the output from instruments and for general audio equipment. Signals are sent along a single-core shielded cable with the result that the method is more prone to noise than balanced transmission. However, IO circuits are simpler and cheaper and the method is therefore used for most commercial products.

**BUSS (Bus)**
When mixing signals, this refers to the wires that the mixed signals are sent along or the location or bus via which they travel. There are various types of buses including group buses in which the signals are grouped, 2MIX buses in which the two systems in stereo are collected, AUX buses for sending effects, and various monitor buses.

**CASCADE**
This is a method of connection with the mixer if there are insufficient input channels. If two or more mixers are combined and connected to the buses, the multiple mixers function as a single mixer. Cascade does not refer to the type of sub-mixer connection in which the signals gathered by one mixer are connected to the input of another mixer.

**CHORUS**
This effector electrically shifts sound to give it fullness and so output a chorus effect. In stereo, there are two types of choruses: those in which one of the two outputs is adjusted (the other being direct) and those in which both outputs are adjusted.

**COMPRESSOR**
This effector reduces the peak during attacks and amplifies it during releases to achieve an extension effect.

**CUE**
Tape cueing refers to the searching for the start of tracks. In connection with mixers, CUE means to return to the performer. When over-dubbing in multi-recording, CUEing is often used to mix pre-recorded sounds with those of the performer.

**CHANNEL FADER**
Originally, this indicated a slider volume control to determine signal level. In connection with mixer input channels, it is a slider volume which is used to adjust the level of the input signal to set the mixing level.

**FLANGER**
This is used to output a flanging (distortion) effect.

**GROUPING**
This function is used on multi-channel mixers. Instead of the signals being sent directly from the input channels to the left and right output channels, they are momentarily grouped, mixed in groups, then output to the main output. In practice, it is usual for sounds from instruments in the same section (percussion, strings, brass, etc.) to be grouped.
Groups are mixed as is and the results sent (in groups) to each of the MTR tracks to be recorded.

**MASTER FADER**

This volume determines the level of the signals after mixing. In contrast to the channel faders, which are used to adjust the level of the signals input to each channel, the master fader adjusts the overall level of the finished output signal.

**MONITOR**

Monitor means to listen on a test basis to the mixed sounds to be recorded or the sounds during a performance.

**OVERLOAD**

This occurs if the input exceeds the permissible level.

**PA**

This is an ocranym for Public Address and refers to both the voice and the device. The term SOUND REINFORCEMENT is also used.

**PAN POT**

This volume is used to move a single signal to the desired position between left and right channels. In mixers, input signals are not simply restricted to left and right channels but can be placed placed on two or more bus lines.

**PING-PONG**

In multirecording, this refers to the recording of sounds from one track to another on the same tape.

**PITCH (control)**

MTR pitch control refers to the changing of tape speed during recording or playback to change the sound's pitch.

**PUNCH IN/OUT**

This refers to the erasing of single portions of prerecorded tracks and the recording of new sounds in that portion.

**REMIX**

Sending back to the mixer the output of multi track recorders using track down, etc.

**SEND/RETURN**

These are the terminals used to send signals to the effectors (SEND) and to receive signals from the effectors (RETURN). They are the same as AUX OUT and IN.

**SIMUL SYNC**

Unified recording and playback heads which allow simultaneous recording and playback. This is essential for ping-pong recording.

**SOLO**

This function allows a single input channel to be monitored. This is useful for checking the level of that channel. Pressing the solo switch for any one channel allows that channel only to be monitored.

**TRIM**

This is an abbreviation of trimming. In mixers, it refers to gain control. This volume is used to control the amplification of either the mike or line signals input to the mixer. S/N ratio deteriorates if the signal is too weak and distortion results if it is too strong. The trimmer is used to set the optimum level of the mixer.

**XLR**

This is a low-frequency connector. This is currently the most commonly used connector in professional equipment.

SANSUI

SANSUI ELECTRIC CO., LTD.: 14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan
PHONE: (03) 324-8891 / TELEX: 232-2076 (International Division)

SANSUI ELECTRONICS CORPORATION: 1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
17150 South Margay Ave. Carson, California 90746 U.S.A.
3036 Koapaka Street. Honolulu, Hawaii 96819 U.S.A.

SANSUI ELECTRONICS G.M.B.H.: Paul Ehrich Strasse 8, 6074 Rödermark 2, West Germany

山水電気株式会社　本社　東京都杉並区和泉2-14-1(〒168)

(SM2-128) Printed in Japan (1989.03.C) <Stock No. 36547500>